

SONY®

UHF SYNTHESIZED TRANSMITTER

WRT-805A

SERVICE MANUAL

AU Model

 WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

TABLE OF CONTENTS

SECTION 1 OPERATING INSTRUCTIONS	1-1	
 SECTION 2 SERVICE OVERVIEW		
2-1 Disassembly	2-1	
2-2. Notes on Parts Replacement	2-2	
2-2-1. Tightening torque for Screws	2-2	
2-2-2. EEPROM (IC405) Replacement	2-2	
 SECTION 3 ELECTRICAL ALIGNMENT		
3-1. Equipment and Tools	3-1	
3-2. Adjustments	3-2	
3-2-1. Power Supply Voltage Check	3-3	
3-2-2. Carrier Frequency Adjustment	3-4	
3-2-3. RF Power Output Adjustment	3-4	
3-2-4. Reference Frequency Deviation Adjustment	3-5	
3-2-5. Maximum Frequency Deviation Adjustment	3-6	
3-2-6. Distortion Ratio Check	3-6	
3-2-7. S/N Check	3-7	
3-2-8. Frequency Characteristics Check	3-8	
3-2-9. Tone Signal Adjustment	3-8	
3-2-10. Battery alarm signal check	3-9	
3-2-11. Spurious Emissions Check	3-11	
 SECTION 4 BLOCK DIAGRAM		4-1
 SECTION 5 SEMICONDUCTOR PIN ASSIGNMENTS		5-1
 SECTION 6 BOARD LAYOUT AND SCHEMATIC DIAGRAM		6-1
 SECTION 7 SPARE PARTS		
7-1. Notes on Repair Parts	7-1	
7-2. Exploded View and Parts List	7-2	
7-3. Electrical Parts List	7-3	
7-4. Accessories Supplied	7-6	

Table of Contents

Precautions	2	Settings	11
Introduction	3	Initiating Setting Mode	11
Features	3	Changing the Channel Selection	12
Channels and Carrier Frequencies	5	Changing the Input Attenuation Setting	13
Parts Identification	6	Resetting the Accumulated Time Indication	14
Power Supply	8	Error Messages	14
Connections	10	Specifications	15
Notes on Microphone System Operation	11		

Precautions

- The unit is designed for use in ambient temperature range of 0°C to 50°C (32°F to 122°F).
- Do not place the unit on or near heat sources, such as lighting equipment, power amplifiers, or in a place subject to direct sunlight or excessive moisture. In such places, the external finish or internal parts of the unit may be damaged.
- If the unit is used in a very humid or dusty place or in a place subject to an active gas, clean its surface as well as the connectors with a dry, soft cloth soon after use. Lengthy use of the unit in such places or not cleaning it after its use in such places may shorten its life.
- When cleaning the unit, never use organic solvents such as thinners or benzene, which will damage the finish of the unit.
- The unit has been factory adjusted precisely. Do not tamper with its internal parts or attempt to repair it.

Introduction

The WRT-805A is a transmitter to be used in combination with the WRR-800A/801A UHF Synthesized Diversity Tuner for an 800-MHz band UHF synthesized wireless microphone system for broadcast or movie production purpose.

The WRT-805A can also be used in conventional Sony Wireless Microphone System composed of the WRT-810A/820A UHF Synthesized Transmitter, the WRR-810A/820A/840A/850A UHF Synthesized Diversity Tuner, etc.

The microphone/transmitter and tuners of the wireless microphone system are classified by frequency band. A 14-MHz frequency band (or two consecutive-numbered TV channels, such as 66 and 67 of the WRT-805A) is assigned to each microphone/transmitter and tuner model. In building up a UHF wireless microphone system, be sure to combine a microphone/transmitter and a tuner having the same TV channel number.

Features

Easy selection of 102 channels

The unit can operate on any one of 102 carrier frequencies selected by a simple button operation.

Compact and lightweight

Innovative high-density mounting technology has enabled the creation of this compact and lightweight transmitter, which lets you move anywhere for Electronic News Gathering (ENG) and Electronic Field Production (EFP). The curved design of the moulded case allows a comfortable fit to your waist.

Remote battery alarm on tuner

This transmitter has capability of transmitting "Battery status information" to the WRR-800A/801A/850A to give advance warning of battery depletion.

The information is sent to the WRR-800A/801A/850A in approx. 1 hour advance to battery exhaust so that they can safely replace battery of the transmitter. When the WRR-800A/801A/850A receives the information, the LED and the LCD on the panel start flashing.

Operation powered by easily available battery

The built-in high efficiency DC-DC converter allows stable operation, for about 6 hours continuously, with just a single LR6 (size AA) alkaline battery.

Introduction

LCD for coordinated operation control

The LCD shows the current channel number, the residual battery power, input attenuation setting, AF input level and RF output.

An accumulated operation time indication is also provided for simple control of the time of battery use (in 1-minute increments).

Saved channel and input attenuation settings

The unit stores the channel and the input attenuation setting when it is turned off. The saved settings are retained even if the battery is removed. Therefore, when using the unit next time, you need not make the same settings again.

Highly reliable electronic attenuator

The built-in input level attenuator is adjustable in a range of 0 to 21 dB in 3-dB steps. It reduces signal distortion when an excessively strong audio signal is inputted.

RF carrier with tone signal

The unit transmits the RF carrier accompanied by a tone signal, enabling the tuner with a tone squelch circuit to take out only the target audio signal received.

Wide dynamic range and low noise

The compander (compressor/expander) system enables transmission over a wide dynamic range with minimum noise.

Audio input connector (3.5-mm dia.) with locking mechanism

The screw-type locking mechanism ensures reliable connection.

Compact helical antenna

Channels and Carrier Frequencies

The WRT-805A can transmit on any selected wireless channel among those listed below.

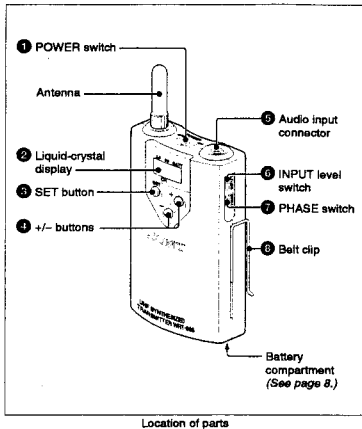
For channel selection, see "Changing the Channel Selection" on page 12.

WL Channel	Frequency (MHz)	WL Channel	Frequency (MHz)	WL Channel	Frequency (MHz)	WL Channel	Frequency (MHz)
66-01	792.250	66-27	795.500	67-01	799.250	67-27	802.500
66-02	792.375	66-28	795.625	67-02	799.375	67-28	802.625
66-03	792.500	66-29	795.750	67-03	799.500	67-29	802.750
66-04	792.625	66-30	795.875	67-04	799.625	67-30	802.875
66-05	792.750	66-31	796.000	67-05	799.750	67-31	803.000
66-06	792.875	66-32	796.125	67-06	799.875	67-32	803.125
66-07	793.000	66-33	796.250	67-07	800.000	67-33	803.250
66-08	793.125	66-34	796.375	67-08	800.125	67-34	803.375
66-09	793.250	66-35	796.500	67-09	800.250	67-35	803.500
66-10	793.375	66-36	796.625	67-10	800.375	67-36	803.625
66-11	793.500	66-37	796.750	67-11	800.500	67-37	803.750
66-12	793.625	66-38	796.875	67-12	800.625	67-38	803.875
66-13	793.750	66-39	797.000	67-13	800.750	67-39	804.000
66-14	793.875	66-40	797.125	67-14	800.875	67-40	804.125
66-15	794.000	66-41	797.250	67-15	801.000	67-41	804.250
66-16	794.125	66-42	797.375	67-16	801.125	67-42	804.375
66-17	794.250	66-43	797.500	67-17	801.250	67-43	804.500
66-18	794.375	66-44	797.625	67-18	801.375	67-44	804.625
66-19	794.500	66-45	797.750	67-19	801.500	67-45	804.750
66-20	794.625	66-46	797.875	67-20	801.625	67-46	804.875
66-21	794.750	66-47	798.000	67-21	801.750	67-47	805.000
66-22	794.875	66-48	798.125	67-22	801.875	67-48	805.125
66-23	795.000	66-49	798.250	67-23	802.000	67-49	805.250
66-24	795.125	66-50	798.375	67-24	802.125	67-50	805.375
66-25	795.250	66-51	798.500	67-25	802.250	67-51	805.500
66-26	795.375			67-26	802.375		

SECTION 1
OPERATING INSTRUCTIONS

This section is extracted
from operation manual

Parts Identification



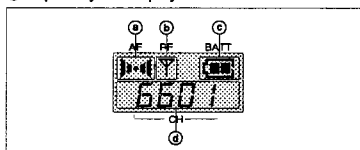
1 POWER switch

Turns the power of the transmitter ON or OFF. When you set this switch to ON without holding any other button, the transmitter is set to normal Transmit mode and transmits the signal of the selected channel. When you set this switch to ON while holding the SET button down, Setting mode is initiated. No signal is transmitted in Setting mode. For setting mode, see "Settings" on page 11.

Note

Be sure to connect a microphone or guitar cable before turning the power ON.

2 Liquid-crystal display



3 AF (audio input) indication

Lights when an audio signal over the reference level is being supplied.

4 RF (antenna output) indication

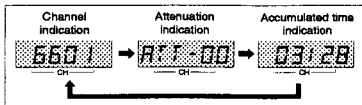
Lights when a signal is being transmitted from the antenna.

5 BATT (battery) indication

Displays the status of the battery. See "Battery indication" on page 9.

6 CH (channel) indication

Displays the transmission channel. Each time you press the SET button in normal Transmit mode, the channel indication changes to the input attenuation and accumulated time indications.



In Attenuation indication mode, it displays the input attenuation setting in dB, which can be changed in a range of 0 to 21 dB in 3-dB steps.

In Accumulated time indication mode, it displays the accumulated time of battery use (in 1-minute increments). For adjustments, see "Changing the Channel Selection" on page 12, "Changing the Input Attenuation Setting" on page 13 or "Resetting the Accumulated Time Indication" on page 14.

7 SET button

In normal transmit mode, press this button to change the indication items in the lower half of the liquid-crystal display.

When you set the POWER switch to ON while holding this button down, setting mode is initiated. In Setting mode, press this button to select the item to be set.

For Setting mode, see "Settings" on page 11.

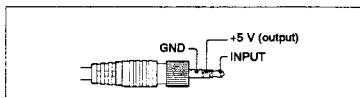
8 +/- (+ selection) / - (- selection/reset) buttons

In setting mode, select the transmission channel and attenuator level using either of these buttons, or reset the time-of-use indication to "00:00" with the - button.

For Setting mode, see "Settings" on page 11.

9 Audio input connector (ø3.5 mm, with locking mechanism)

To connect a microphone or other audio source.



See "Connections" on page 10.

Parts Identification

1 INPUT level switch

Select the reference input level appropriate for the connected audio source.

-60 dBV: For a microphone
-40 dBV: For an electric guitar

2 PHASE switch

Select the input phase appropriate for the connected audio source.

= : For a microphone other than the ECM-44BMP or an electric guitar

ø : For the ECM-44BMP

Switch functions

1 PHASE switch	2 INPUT level switch
	-60 dBV
	-40 dBV
=	ECM-121BMP ECM-122BMP ECM-310BMP
ø	ECM-44BMP

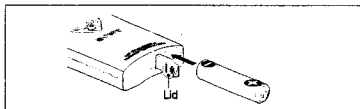
3 Belt clip

You can easily carry the transmitter attached to your clothing on your belt, etc. Depending on your selection of the mount holes for the belt clip, you can adjust the position or even carry the unit with the antenna downward.

Power Supply

The transmitter can operate on one LR6 (size AA) alkaline battery continuously for about 6 hours at 25°C (77°F).

Inserting the battery



Battery indication

When you turn the power on, the battery status appears in the BATT indication on the liquid-crystal display.

	1	2	3	4
BATT indication	Lights	Lights	Flashes	Goes off
Battery condition	Good	Less than half-charge	Almost exhausted	Completely exhausted

When the battery reaches stage 3 shown in the table, the BATT indication on the WRR-800A/801A/850A also starts flashing.

Promptly replace the battery when the indications flash.

Note

The indication may be incorrect if the battery is not new when inserted. If you plan to use the transmitter for a long period, it is best to replace the battery with new one.

Notes on battery

- Use a new alkaline battery.
- Be careful to insert the battery with the correct polarity.
- When not using the transmitter for a long period, remove the battery to avoid leakage. If the battery does leak, clean all leakage from the unit and insert a new battery. Leakage left in the unit may cause poor battery contact. If there seems to be poor battery contact, consult your Sony dealer.

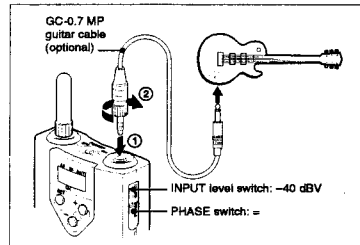
Connections

Caution

When connecting a microphone or electric guitar to the unit, be sure to turn the unit off.

To connect an electric guitar

For connection of an electric guitar, use the optional GC-0.7 MP Guitar Cable.



To obtain the proper output level

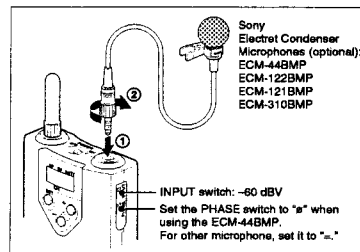
The optimum level setting depends on type of guitar. Set the INPUT level switch and the ATT (attenuator) level of this unit according to the guitar to be used.

Loud noise: If noise is not negligible even if the INPUT switch is set at "-40 dBV" and the ATT level is "0 dB," set the INPUT switch to "-60 dBV" and adjust the ATT level for an optimum result.

Distortion: If the guitar sound is distorted even if the INPUT switch is set at "-40 dBV" and the ATT level is "0 dB," increase the ATT level by 3 dB (0 to 3 to 6 ... 21 dB). For the ATT level adjustment, see page 13.

To connect a microphone

When using one of the following optional Sony Electret Condenser Microphones equipped with a miniature phone plug, connect it as illustrated below.



Notes on Microphone System Operation

- To operate with 2 or more channels, maintain a distance of at least 30 cm (1 ft.) between each pair of transmitters. For details of operation with 2 or more channels, refer to the Operating Instructions for the WRR-800A/801A/850A UHF Synthesized Diversity Tuners.
- Ensure that the tuners set to channels not being used are either turned off or set to the minimum output level.
- When powering the transmitter on or off, to keep the noise to a minimum, set the audio output level from the tuner or mixer to a minimum.
- Powering the transmitter on without checking the channel selection first may interfere with the operation of other microphones/transmitters, if the current setting is already being used.
- Separate the reception antennas and the transmitter by more than 3 meters (10 ft.).

Settings

Initiating Setting Mode

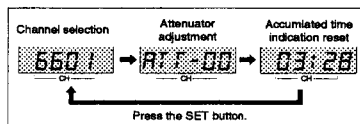
In Setting mode, you can change the transmission channel and the attenuation level, or reset the accumulated time indication.

To enter Setting mode

While holding down the SET button, set the POWER switch to ON. Hold the SET button down until a display appears on the liquid-crystal display.

The transmitter enters Setting mode and the indication before the transmitter was previously turned OFF flashes on the liquid-crystal display.

Each time you press the SET button, Channel selection mode, Attenuator adjustment mode (page 13) and Accumulated time indication reset mode (page 14) are cyclically switched.



Settings

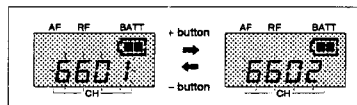
Changing the Channel Selection

1 Set the unit to Setting mode.

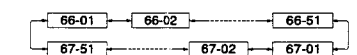
If the channel number is not displayed, press the SET button to obtain the channel number indication.

2 Press the + or - button to select the channel.

Pressing the + button cyclically changes the channel indication in the order shown in the table of "Channels and Carrier Frequencies" on page 5. Pressing the - button changes it in reverse order.



If you keep either button pressed, the channel setting will be incremented or decremented successively. The display will cycle from 66-01 through 67-51.



Changing the Input Attenuation Setting

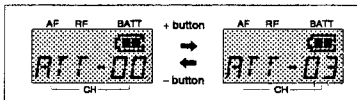
You can change the input attenuation setting in 3-dB steps in a range of 0 to 21 dB. You can change it either in Setting mode or in Transmit mode.

Changing in Setting mode

1 Set the unit to Setting mode.

2 If the attenuation level is not displayed, press the SET button to obtain the attenuation indication.

3 Press the + or - button to select the attenuation setting.



If you keep either button pressed, the level will be incremented or decremented successively.

4 Once the desired level appears, set the POWER switch to OFF to release Setting mode. Or, press the SET button to continue operations in Setting mode.

3 Once the desired channel number appears, set the POWER switch to OFF to release Setting mode. Or, press the SET button to continue operations in Setting mode.

The next time you turn on the power only by setting the POWER switch to ON, the transmitter will be set to Transmit mode with the selected channel.

Notes

- The unit cannot transmit in Setting mode.
- Make sure that the channel selected is the same as that selected on the tuner used in the same system.
- Depending on the noise or interference conditions, the selectable channels may not necessarily all be usable. If necessary, you can determine the usable channels by stepping the channel selection through a number of channels on a tuner with the transmitter set to OFF. Those channels on which the RF indicator of the tuner does not light are usable.
- If there is a TV broadcasting station near by, do not use the station's channel.
- The unit may not operate correctly if it is turned on again immediately after turning off the power while in setting mode. Pause for a few seconds or more before turning on the power again.

The next time you turn on the power only by setting the POWER switch to ON, the transmitter will be set to Transmit mode with the selected attenuation setting.

Changing in Transmit mode

You can also change the input attenuation setting during transmission.

1 If the attenuation level is not displayed, press the SET button to obtain the attenuation indication.

2 Press the + or - button to select the attenuation setting.

Settings

Resetting the Accumulated Time Indication

The time indication accumulates time in hours and minutes when the WRT-805A is on. Reset the indication to "00:00" whenever you replace the battery so that it can display the running time of the battery.

- 1

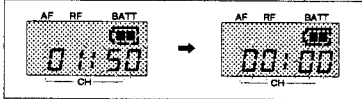
Set the unit to Setting mode.
- 2

If the accumulated time is not displayed, press the SET button to obtain the accumulated time indication.
- 3

Press the - button.
- 4

Set the POWER switch to OFF to release Setting mode.

The time indication resets to "00:00."



While you see "00:00" indication, you can go back to previous value by pressing the + button.

Error Messages

When a problem occurs, one of the following error messages may appear on the display.

Messages	Contents	Measures
Error 11	An error occurred in backup memory data.	The data was initialized. Set the transmitting channel and the input attenuation again.
Error 21	The PLL synthesized circuit is in trouble.	Contact your Sony dealer.
Error 31	The battery voltage exceeds the allowable value.	Use the specified battery.
Error 41	Defect of an internal circuit	Contact your Sony dealer.
Error 51	Defect of the A/D converter circuit	
Error 61	Defect of an internal circuit	

14

Specifications

Transmitter and modulator section

Oscillator	Crystal controlled PLL synthesizer
Type of emission	110KF3E
Carrier frequencies	792.250 to 805.500 MHz
RF power output	10 mW (50-ohm load)
Frequency stability	Within ±0.002%
Tone signal	32.768 kHz
Type of antenna	1/4-wavelength helical
Pre-emphasis	50 μs
Deviation	±16 kHz (−40 dBV ¹⁾ , 1 kHz input ²⁾ ±5 kHz (−60 dBV ¹⁾ , 1 kHz input ²⁾
Maximum deviation	±40 kHz
Frequency response	70 to 13,000 Hz
Signal-to-noise ratio	57 dB or more (A-weighted, modulation frequency 1 kHz, with ±5 kHz deviation at WRR-800A/801A)
Audio attenuator	0 to 21 dB, variable in 3-dB steps
Reference input level	−60/−40 dBV ¹⁾ at audio attenuator 0 dB

Power section

Power requirements	1.5 V DC (one LR6/size AA alkaline battery)
Battery life	Approx. 6 hours at 25°C or 77°F with Sony LR6 alkaline battery

General

Operating temperature	0°C to +50°C (32°F to 122°F)
Storage temperature	−30°C to +60°C (−22°F to +140°F)
Dimensions	58 × 95 × 21 mm (w/h/d) (2 1/4 × 3 3/4 × 7/16 inches)
Mass	Approx. 100 g (3.5 oz) including battery

Supplied accessory

Operating Instructions (1)

Design and specifications are subject to change without notice.

1) 0 dBV = 1 Vrms

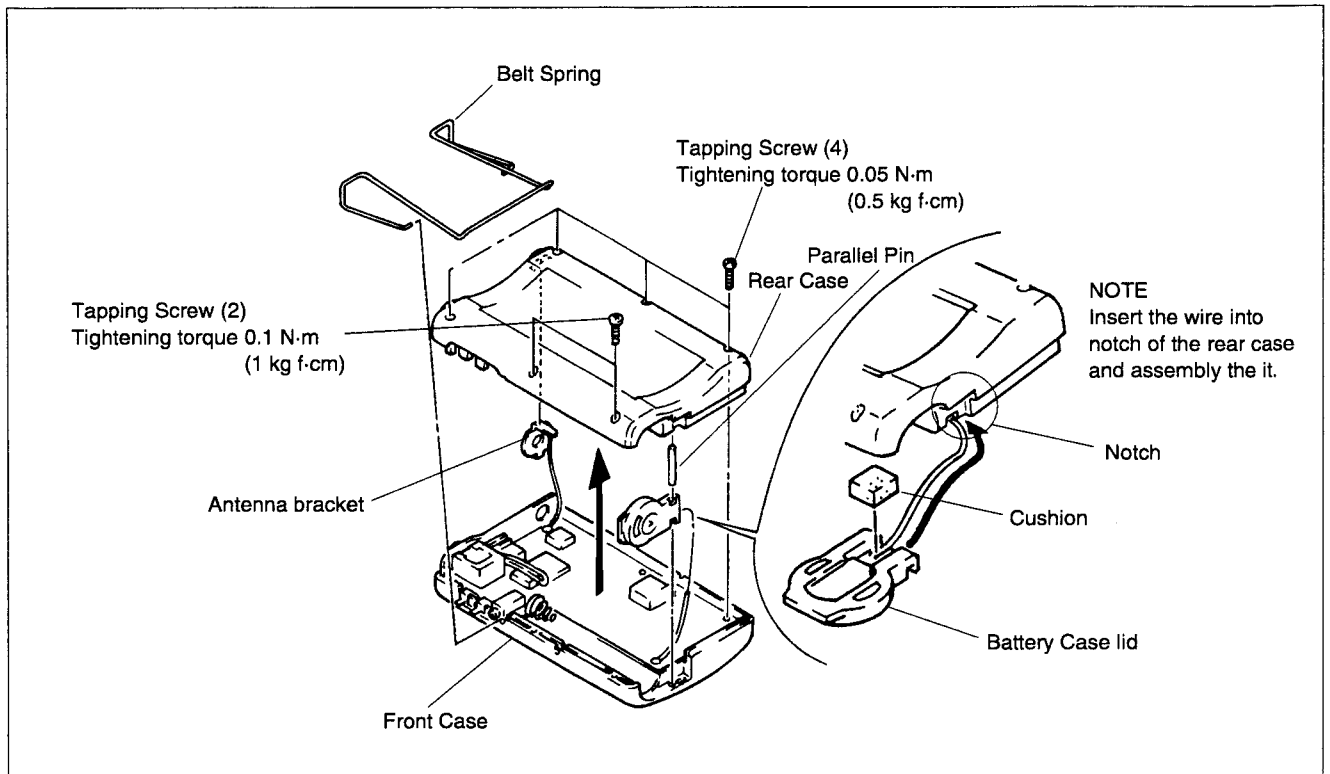
2) INPUT switch at −60 dBV position

SECTION 2

SERVICE OVERVIEW

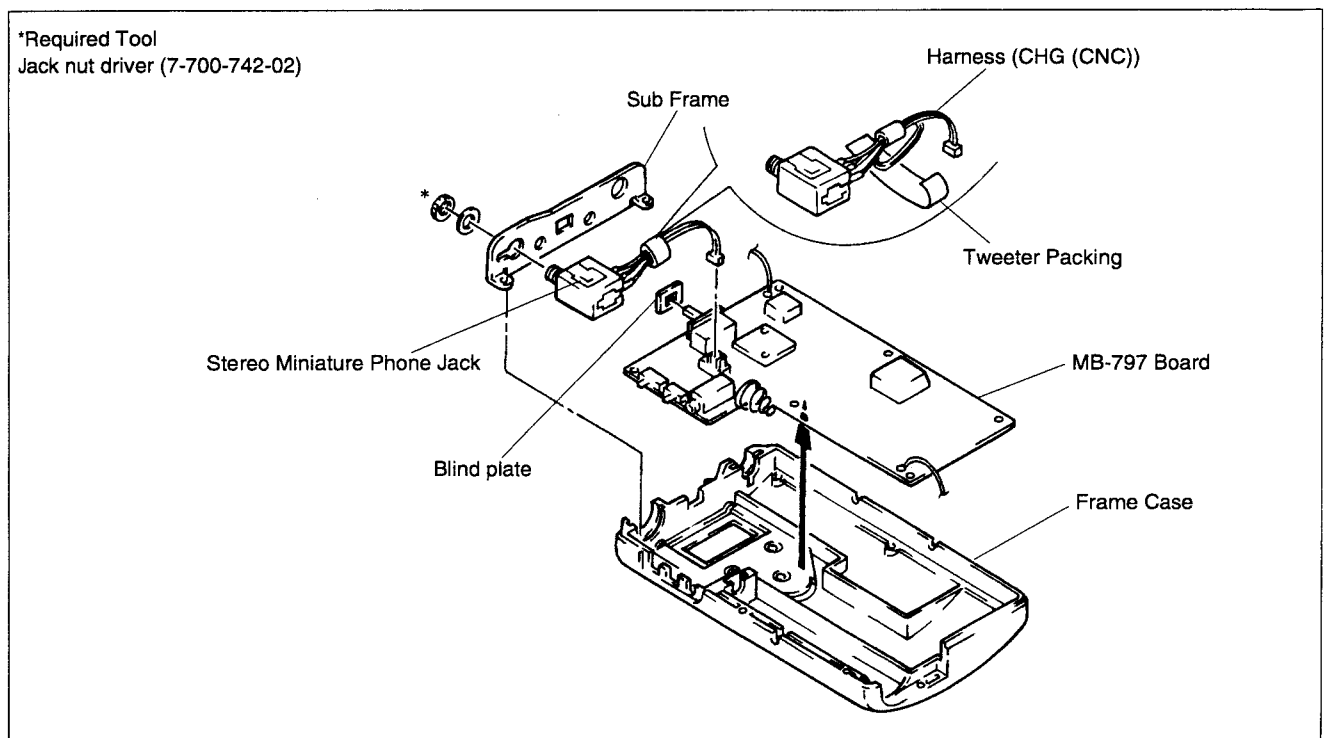
2-1 Disassembly

Front case/Battery case lid/Parallel pin/Battery/Belt spring



Stereo Miniature Phone Jack/ Sub Frame/MB-797 Board

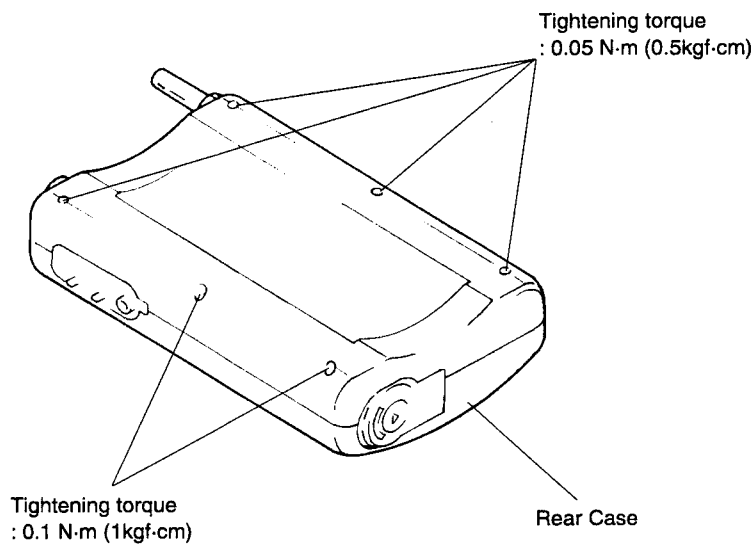
*Required Tool
Jack nut driver (7-700-742-02)



2-2. Notes on Parts Replacement

2-2-1. Tightening torque for Screws

Torque the following screws to the tightening torque in figure.



2-2-2. EEPROM (IC405) Replacement

When replacing EEPROM (IC405) on the MB-797 board or replacing MB-797 board, perform the following operation.

When the power is turned on initially after the replacement:

1. "ERR-11" is indicated on the display.
2. Turn off the power. Next turn on the power again.
Confirm that "66 - 01" is indicated on the display.

SECTION 3

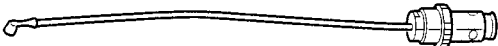
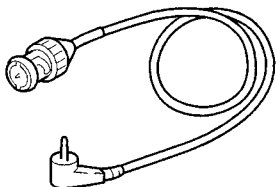
ELECTRICAL ALIGNMENT

3-1. Equipment and Tools

Equipment Required

Name	Specifications	Model Name
DC POWER SUPPLY	Output regulated voltage: 0 to 5 V, 2 A	—
DC CURRENT METER	Measurement: 300 mA	—
SPECTRUM ANALYZER	Frequency: 10 kHz to 4 GHz	ADVANTEST R3371B or equivalent
MODULATION ANALYZER	RF input Frequency: 150 kHz to 3 GHz	ANRITSU MS616A or equivalent
RF POWER METER WITH POWER SENSOR	Range: 3 μ W to 100 mW	HP 435B (Power sensor HP 8482A) or equivalent
AUDIO ANALYZER	· Oscillator: 20 Hz to 100 kHz · DISTORTION ANALYZER · S/N METER · LEVEL METER	HP 8903B (with A-weight filter) or equivalent
FREQUENCY COUNTER	Frequency: 10 Hz to 1000 MHz Effective digits: 10 digits	HP 5385A, HP 8901B or equivalent
OSCILLOSCOPE	Frequency: DC to 10 MHz	—
DIGITAL VOLT METER	Effective digits: 3 1/2 digits	—

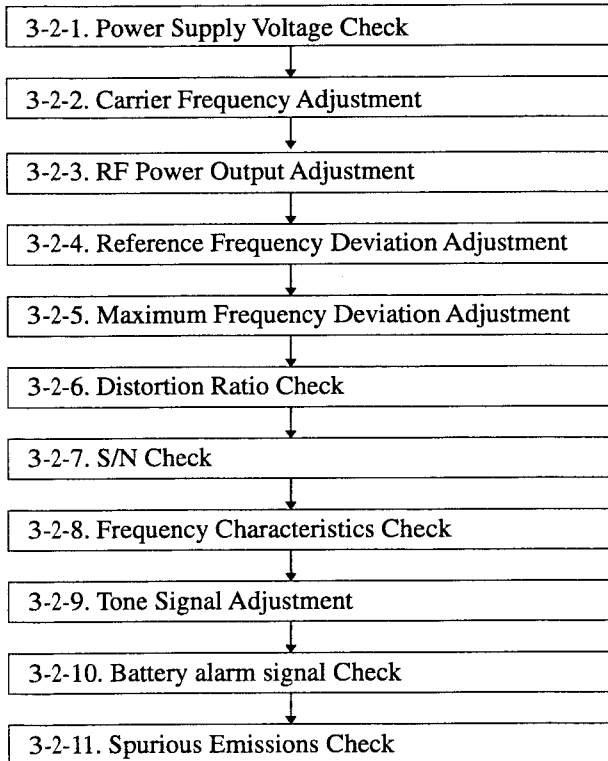
Tool

Name	Part No.	Remarks
RF adjusting cable	J-6401-120-A	
Adjustor (0.4 × 1.3 mm)	7-721-052-81	
Mic input cable	J-6402-340-A	

3-2. Adjustments

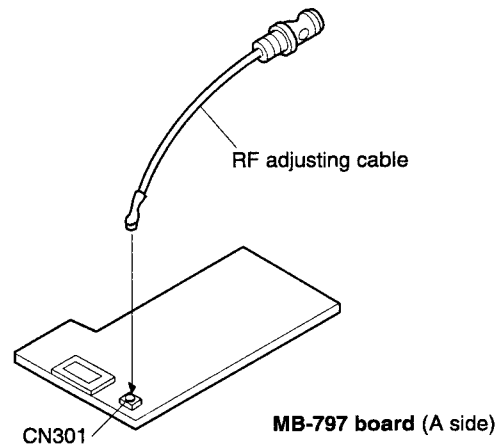
This section describes adjustments and checks which must be completed to assure that the specifications are complied with.

Make adjustment and checks following the procedure below:

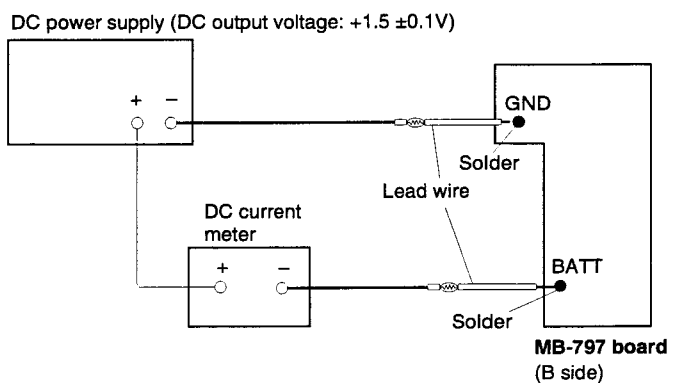


Preparation

1. When adjustments are performed, remove the MB-797 board from WRT-805A unit.
Refer to the "Section 2. Service Overview" for removal.
2. Connect the RF adjusting cable (J-6401-120-A) to the antenna connector (CN301) on the MB-797 board as below.



3. Connecting the DC power supply
Supply the DC power to the battery terminal on MB-797 board using the wires as below.



Check

After the DC power supply connection is complete, set the power switch (S500) to ON, and check the level on DC current meter.

DC current meter indication level: 130 to 155 mA

Switch and Control Initial Setting

MB-797 board

INPUT level switch (S100): -60 (dBV)

PHASE switch (S101): =

Switch and Control Setting

AU66 model; 66-02 channel

Attenuation setting: 0 dB

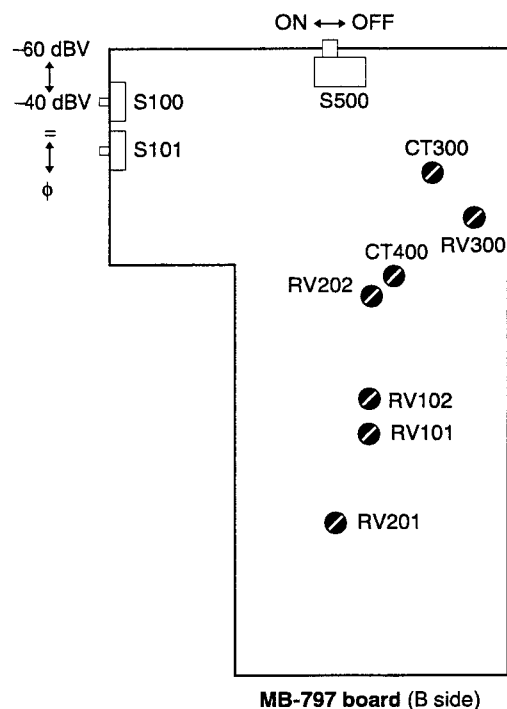
Accumulated time setting: "00:00"

Note

Note down the setting position before the adjustment.

After the Adjustment complete, set the original position.

Adjustment Location



3-2-1. Power Supply Voltage Check

Equipment and Tools

DC power supply

DC output voltage: $+1.5 \pm 0.1$ Vdc

DC current meter

DC volt meter (or Digital multimeter)

Adjustor (SONY part no. 7-721-052-81)

Switch and Control Setting

Same as "4. Switch and Control Initial Setting" on page 3-2.

Procedure

- (1) Set the POWER switch (S500) on the MB-797 board to ON.

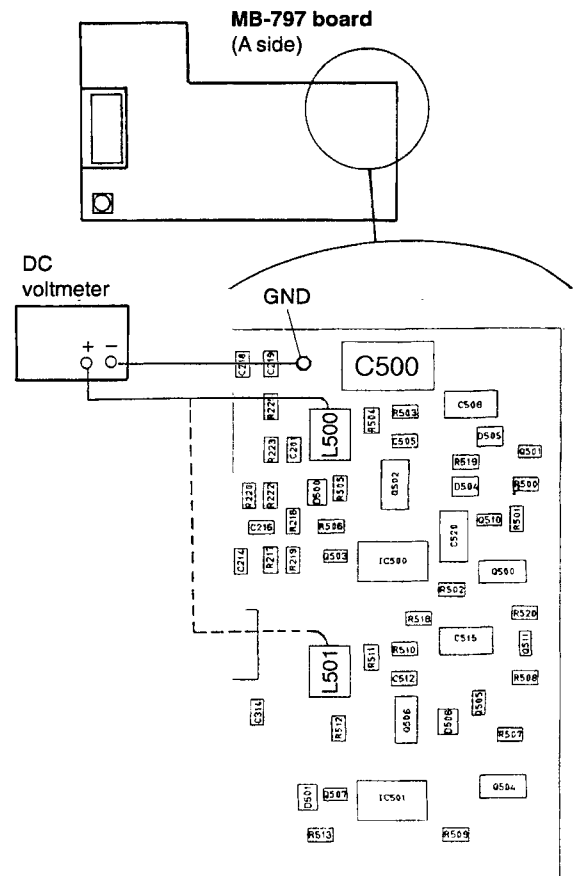
- (2) Check the DC Voltage of the L501 terminal to the specified voltage as below:

Specification: L501 terminal DC Voltage

$$= +3.0 \pm 0.1 \text{ Vdc (For } V_{cc1})$$

- (3) Check the DC voltage of the L500 terminal to the specified voltage as below:

Specification: L500 terminal DC voltage

$$= +5.0 \pm 0.1 \text{Vdc (For } V_{cc2})$$


3-2-2. Carrier Frequency Adjustment

Equipment and Tools

DC power supply

DC output voltage: $+1.5 \pm 0.1$ Vdc

DC current meter

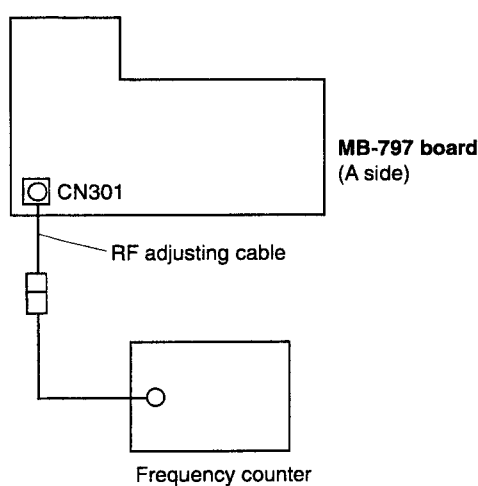
Frequency counter

Adjustor (SONY Part no. 7-721-052-81)

RF Adjusting cable (SONY Part No. J-6041-120-A)

Connections

(For connecting the DC power supply, refer to the "Preparations" on page 3-3.)



Switch and Control Setting

Same as "4. Switch and control Setting" on page 3-3 expect the following setting.

Transmission Channel

AU66 model; 67-01 channel

Procedure

- (1) Connect the frequency counter to the antenna connector (RF adjusting cable).
- (2) Adjust $\odot$ CT400 so that the frequency counter reading meets the following specification.

Specification: Carrier frequency mentioned in the table below.

WRT-805A	Carrier frequency
AU66 model	799.250 MHz ± 1 kHz

Adjustment : $\odot$ CT400/MB-797 Board (B side)

3-2-3. RF Power Output Adjustment

Equipment and Tools

DC power supply

DC output voltage: $+1.5 \pm 0.1$ Vdc

DC current meter

Power meter (with power sensor)

RF Adjusting cable (SONY Part No. J-6401-120-A)

Switch and Control Setting

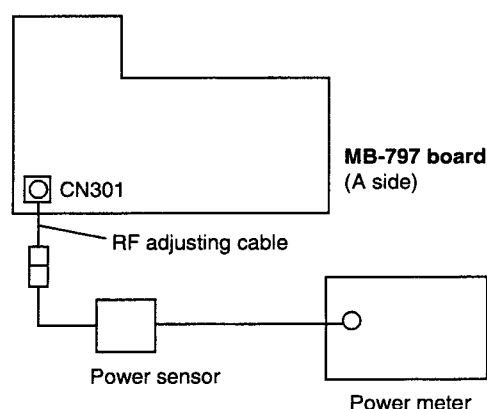
Same as "4. Switch and control Initial Setting" on page 3-3 expect the following setting.

Transmission channel

AU66 model; 67-01 channel

Connections

(For connecting the DC power supply, refer to the "Preparations" on page 3-2.)



Procedure

- (1) Connect the power meter (with power sensor) to the antenna connector (RF adjustment cable).
- (2) Adjust $\odot$ CT300 so that the power meter reading meets the following specification.

Specification: power meter = Maximum

Adjustment : $\odot$ CT300/MB-797 Board (B side)

- (3) Adjust $\odot$ RV300 so that the power meter reading meets the following specification.

Specification: Power meter = $+10.0 \begin{smallmatrix} +0 \\ -2 \end{smallmatrix}$ mW

Adjustment : $\odot$ RV300/MB-797 Board (B side)

3-2-4. Reference Frequency Deviation Adjustment

Equipment and Tools

DC power supply

DC output voltage: $+1.5 \pm 0.1$ Vdc

DC current meter

Audio analyzer

Modulation analyzer

MEASUREMENT: FM

MEASUREMENT RANGE: AUTO or ± 10 kHz
(manual operation)

HPF: 50 Hz

LPF: 20 kHz or 15 kHz

DE EMPHASIS: 50 μ s

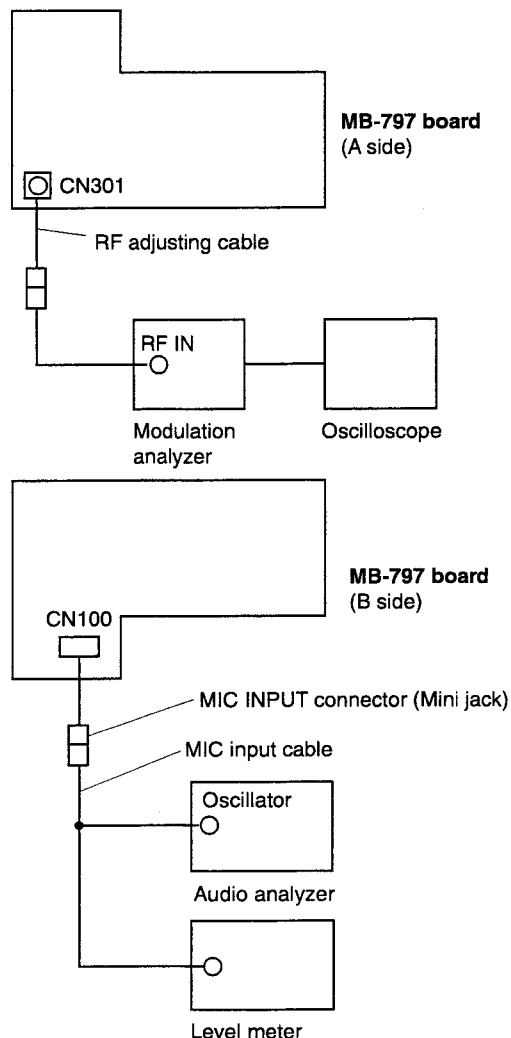
Adjustor (SONY part No. 7-721-052-81)

Mic input cable (SONY part No. J-6402-340-A)

RF adjusting cable (SONY part No. J-6401-120-A)

Connections

(For connecting the DC power supply, refer to the "Preparations" on page 3-2.)



Switch and Control Setting

Same as "4. Switch and Control Setting" on page 3-3 expect the following setting.

Transmission channel

AU66 model; 67-01 channel

Procedure

- (1) Input 1 kHz, -60 dBV (-57.8 dBm) signal to the MIC INPUT connector (with Mic input cable).
- (2) Adjust RV102 so that the frequency deviation for the modulation analyzer reading meets the following specification.
Specification: Frequency deviation = maximum
Adjustment: RV102 /MB-797 board (B side)
- (3) Adjust RV101 so that the frequency deviation for the modulation analyzer reading meets the following specification.
Specification: Frequency deviation = maximum
Adjustment: RV101 /MB-797 board (B side)
- (4) Adjust RV202 so that the frequency deviation for the modulation analyzer reading meets the following specification.
Specification: Frequency deviation = ± 5 kHz ± 0.1 kHz
Adjustment: RV202 /MB-797 board (B side)
- (5) After the adjustment has been completed, perform the "3-2-5. Maximum Frequency Deviation Adjustment".

3-2-5. Maximum Frequency Deviation Adjustment

Note

Be sure to perform this adjustment after "3-2-4. Reference Frequency Deviation Adjustment" has been completed.

Equipment and Tools

DC power supply

DC output voltage: $+1.5 \pm 0.1$ Vdc

DC current meter

Audio analyzer

Modulation analyzer

MEASUREMENT : FM

MEASUREMENT RANGE : AUTO or ± 100 kHz

HPF : 50 Hz

LPF : 15 kHz or 20 kHz

DE EMPHASIS : 50 μ s

Oscilloscope

Adjustor (SONY Part No. 7-721-052-81)

MIC input cable (SONY Part No. J-6402-340-A)

RF Adjusting cable (SONY Part No. J-6401-120-A)

Connections

Same as "3-2-4. Reference Frequency Division adjustments".

Switch and Control Setting

Same as "4. Switch and Control Setting" on page 3-3 expect the following setting.

Transmission Channel

AU66 model; 67-01 channel

Procedure

(1) Input 10 kHz, -24 dBV(-21.8 dBm) signal to the MIC INPUT connector(with Mic input cable).

(2) Adjust $\odot$ RV102 so that the frequency deviation for the modulation analyzer reading meets the following pecification.

Specification: Frequency deviation = maximum

Adjustment: $\odot$ RV102/MB-797 board(B side)

(3) Input 1 kHz, -24 dBV(-21.8 dBm) signal to the MIC INPUT connector(with Mic input cable).

(4) Adjust $\odot$ RV101 so that the frequency deviation for the modulation analyzer reading meets the following specification.

Specification: Frequency deviation = ± 26 kHz ± 0.5 kHz

Adjustment: $\odot$ RV101/MB-797 board(B side)

(5) Adjust $\odot$ RV102 so that the frequency deviation for the modulation analyzer reading meets the following specification.

Specification: Frequency deviation = ± 24.5 kHz ± 0.5 kHz

Adjustment: $\odot$ RV102/MB-797 board(B side)

3-2-6. Distortion Ratio Check

Equipment and Tools

DC power supply

DC output voltage: $+1.5 \pm 0.1$ Vdc

DC current meter

Audio analyzer

Modulation analyzer

MEASUREMENT: FM

MEASUREMENT RANGE: AUTO or ± 40 kHz

HPF: 50 Hz

LPF: 15 kHz or 20 kHz

DE EMPHASIS: 50 μ s

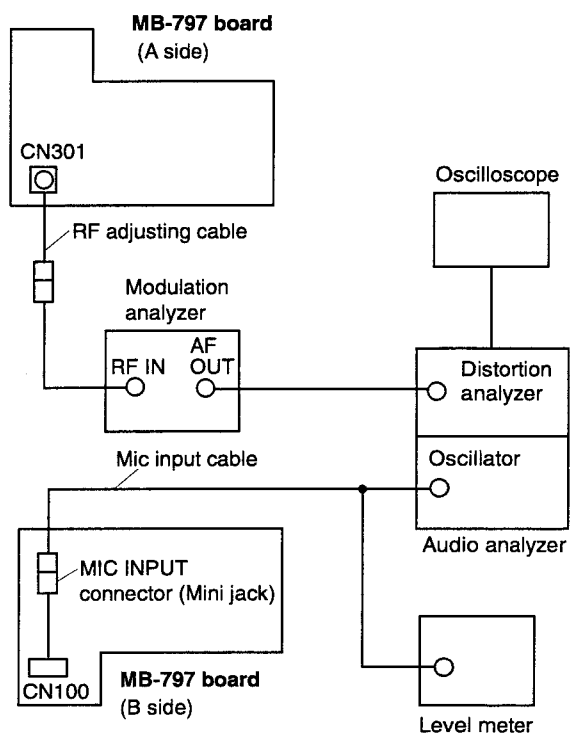
Oscilloscope

Mic input cable (SONY part No. J-6402-340-A)

RF adjustment cable (SONY part No. J-6401-120-A)

Connections

(For connecting the DC power supply, refer to the "preparations" on page 3-2.)



Switch and Control Setting

Same as "4. Switch and Control Setting" on page 3-3 expect the following setting.

Transmission Channel

AU66 model; 67-01 channel

Procedure

- (1) Connect the audio analyzer (distortion analyzer) to the AF OUT connector for the modulation analyzer.
- (2) Set the audio analyzer to distortion measurement (distortion mode).
- (3) Input 1 kHz, -60 dBV (-57.8 dBm) signal to the MIC INPUT connector (with Mic input cable) from audio analyzer (oscillator).
- (4) Check that the distortion analyzer reading is less than 0.90%.
- (5) Input 1 kHz, -24 dBV (-21.8 dBm) signal to the MIC INPUT connector (with Mic input cable).
- (6) Check that the distortion analyzer reading is less than 3%.

3-2-7. S/N Check

Equipment and Tools

DC power supply

DC output Voltage: $+1.5 \pm 0.1$ Vdc

DC current meter

Audio analyzer

Modulation analyzer

MEASUREMENT: FM

MEASUREMENT RANGE: ± 40 kHz

HPF: 50 Hz

LPF: 15 kHz for HP equipment

20 kHz for ANRITSU equipment

DE EMPHASIS: 50 μ s

Mic input cable (SONY part No. J-6402-340-A)

RF adjustment cable (SONY part No. J-6401-120-A)

Connections

Same as "3-2-6. Distortion Ratio Check".

Switch and Control Setting

Same as "4. Switch and Control Setting" on page 3-3 expect the following setting.

Transmission Channel

AU66 model; 67-01 channel

Procedure

- (1) Connect the audio analyzer (level meter) to the AF OUT connector for the modulation analyzer.
- (2) Input 1 kHz, -60 dBV (-57.8 dBm) signal to the MIC INPUT connector (with Mic input cable) from audio analyzer (oscillator).
- (3) Set the audio analyzer to S/N measurement (with A-weighting filter).
- (4) Check that the S/N reading is more than 32dB. (with MIC INPUT connector short-circuited).

3-2-8. Frequency Characteristics Check

Equipment and Tools

DC power supply
DC output Voltage: $+1.5 \pm 0.1$ Vdc
DC current meter
Audio analyzer
Modulation analyzer
MEASUREMENT: FM
MEASUREMENT RANGE: ± 40 kHz
HPF: 50 Hz
LPF: 15 kHz or 20 kHz
DE EMPHASIS: 50 μ s
Oscilloscope
Mic input cable (SONY part No. J-6402-340-A)
RF Adjustment cable (SONY part No. J-6401-120-A)

Connections

Same as "3-2-6. Distortion Ratio Check".

Switch and Control Setting

Same as "4. Switch and Control Setting" on page 3-3 expect the following setting.

Transmission Channel

AU66 model; 67-01 channel

Procedure

- (1) Connect the audio analyzer (level meter) to the AF-OUT connector for the modulation analyzer.
- (2) Set the audio analyzer to level meter mode.
- (3) Input 1 kHz, -60 dBV (-57.8 dBm) signal to the MIC INPUT connector (with Mic input cable) from audio analyzer (oscillator).
- (4) Reads the indication on the audio analyzer (level meter).
- (5) Set the SENSITIVITY on the audio analyzer (level meter) so that the audio analyzer (level meter) reads 0 dB.
- (6) Switch the oscillation frequency for the audio analyzer (oscillator) from 1 kHz to 100 Hz.
- (7) Check that audio analyzer (level meter) reading is 0 ± 1.0 dB.
- (8) Next, switch the oscillation frequency for the audio analyzer (oscillator) from 100 Hz to 10 kHz.
- (9) Check that the reading for the audio analyzer (level meter) is 0 ± 1.0 dB.

3-2-9. Tone Signal Adjustment

Equipment and Tools

DC power supply
DC output Voltage: $+1.5 \pm 0.1$ Vdc
DC current meter
Frequency counter
Spectrum analyzer
Modulation analyzer
RF adjusting connector (See page 3-3.)

Switch and Control Setting

Same as "4. Switch and Control Setting" on page 3-3 expect the following setting.

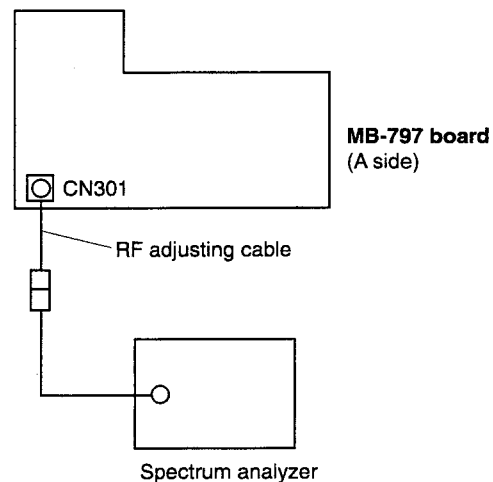
Transmission Channel

AU66 model; 67-01 channel

1. Frequency deviation adjustment

Connections

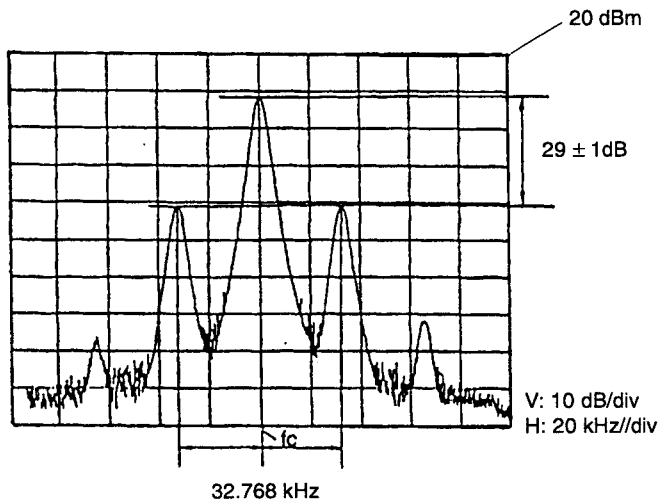
(For connecting the DC power supply, refer to the "Preparations" on page 3-2.)



Procedure

- (1) Set the spectrum analyzer as below:
CENTER FREQUENCY(f_c) : 799.250MHz
REFERENCE LEVEL : 20 dBm
FREQUENCY SPAN : 200kHz (20 kHz/DIV)
RBW (resolution band width) : 3kHz
VBW (video band width) : 1kHz
ATT : 20 dB

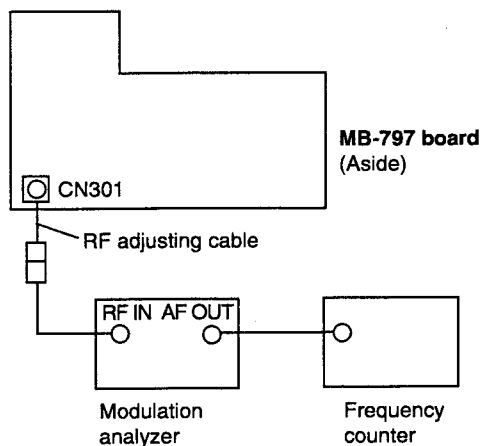
- (2) Adjust $\odot$ RV201 so that level between carrier frequency (frequency center level) on spectrum analyzer and tone signal is within $29 \text{ dB} \pm 1 \text{ dB}$.



2. Frequency check

Connections

(For connecting the DC power supply, refer to the "Preparations" on page 3-3.)



Procedure

Note

Perform the checking with the MIC INPUT connector short-circuit.

- (1) Set the modulation analyzer as below:
 MEASUREMENT: FM
 MEASUREMENT RANGE: $\pm 40 \text{ kHz}$
 HPF: 4 kHz
 LPF: $> 20 \text{ kHz}$
 DE EMPHASIS: OFF
- (2) Check that the frequency counter (resolution : 0.1 Hz setting) reading is $32.768 \text{ kHz} \pm 1 \text{ Hz}$.

3-2-10. Battery alarm signal check

Equipment and Tools

DC power supply
 DC output Voltage: $+1.5 \pm 0.1 \text{ Vdc}$
 DC current meter
 Frequency counter
 Spectrum analyzer
 Modulation analyzer
 RF Adjusting cable (SONY part No. J-6401-120-A)

Switch and Control Setting

Same as "4. Switch and Control Initial Setting" on page 3-3 expect the following Setting.

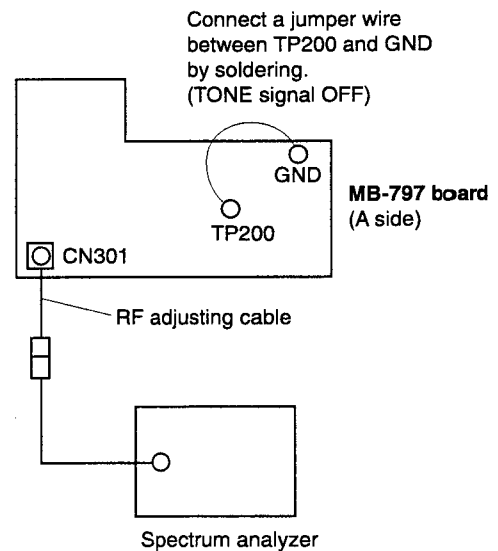
Transmission Channel

AU66 model; 67-01 channel

1. Frequency deviation check

Connections

(For connecting the DC power supply, refer to the "Preparations" on page 3-2.)

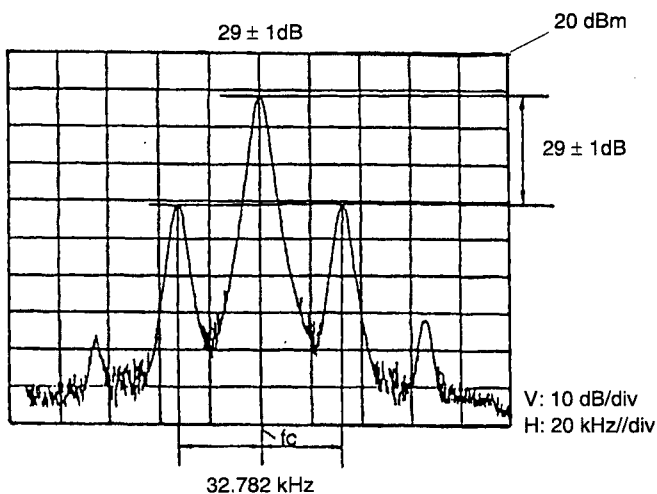


Procedure

Note

Perform the checking with the MIC INPUT connector short-circuited.

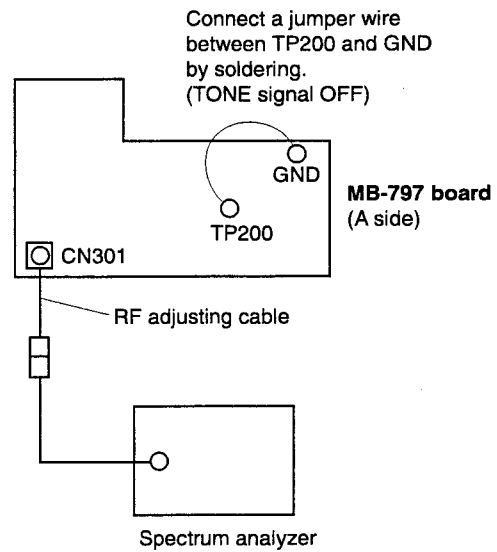
- (1) Set the spectrum analyzer as below:
 - CENTER FREQUENCY(f_c): 799.250MHz
 - REFERENCE LEVEL: 20 dBm
 - FREQUENCY SPAN: 200kHz (20 kHz/DIV)
 - RBW (resolution band width): 3kHz
 - VBW (video band width): 1kHz
 - ATT: 20 dB
- (2) Decrease gradually the DC output voltage of the DC regulated power supply and confirm that the battery alarm signal turns on at $1\text{ V} \pm 0.1\text{ V}$.
- (3) Check that level difference between carrier frequency (center frequency level) on spectrum analyzer and tone signal is within $29 \pm 1\text{ dB}$.



2. Frequency check

Connections

(For connecting the DC power supply, refer to the "Preparations" on page 3-2.)



Procedure

Note

Perform the checking with the MIC INPUT connector short-circuited.

- (1) Set the modulation analyzer as below:
 - MEASUREMENT: FM
 - MEASUREMENT RANGE: $\pm 40\text{ kHz}$
 - HPF: 4 kHz
 - LPF: $> 20\text{ kHz}$
 - DE EMPHASIS: OFF
- (2) Set the DC output voltage of DC power supply to $1\text{ V} \pm 0.1\text{ V}$ so that battery alarm signal goes on.
- (3) Check that frequency counter (resolution : 0.1 Hz) reading is $32.782\text{ kHz} \pm 1\text{ Hz}$.
- (4) After the checking, remove (unsolder) the jumper wire between TP200 and GND on the MB-797 board (A-side).

3-2-11. Spurious Emissions Check

Equipment and Tools

DC power supply

DC output Voltage: $+1.5 \pm 0.1$ Vdc

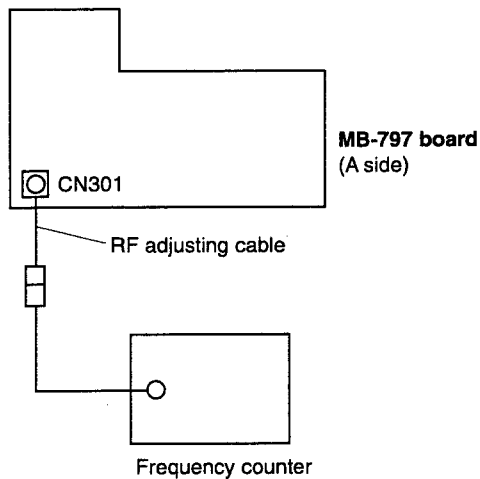
DC current meter

Spectrum analyzer

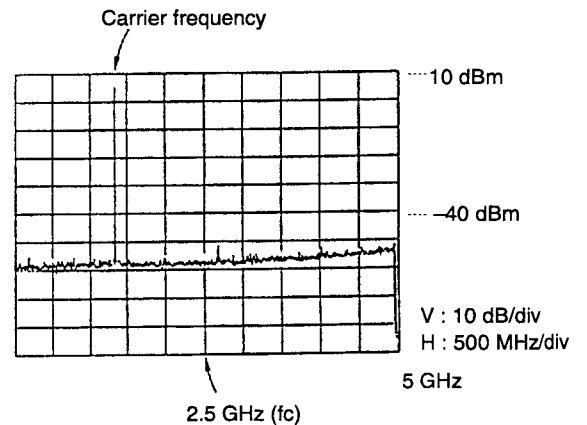
RF adjusting cable (Sony Part No. J-6401-120-A)

Connections

(For connecting the DC power supply, refer to the "Preparations" on page 3-2.)



- (2) Check that the spurious emissions level (up to 4 GHz) reading for the spectrum analyzer remains below -40 dBm.



Switch and Control Setting

Same as "4. Switch and Control Setting" on page 3-3 expect the following setting.

Transmission Channel

AU66 model; 67-01 channel

Procedure

- (1) Set the spectrum analyzer as below;

CENTER FREQUENCY: 2.5 GHz

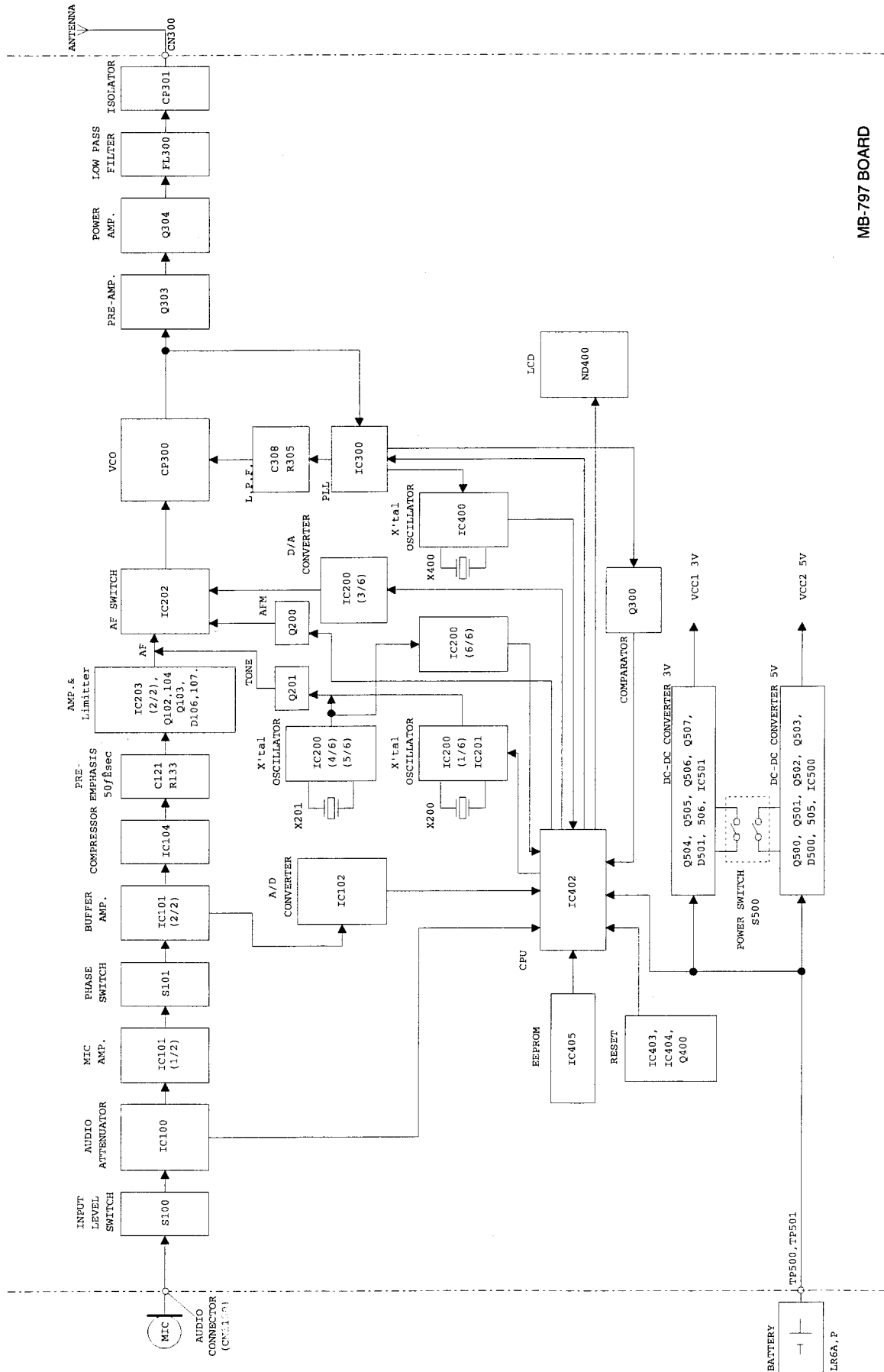
REFERENCE LEVEL: 10 dBm

FREQUENCY SPAN: 5 GHz (500 MHz/DIV)
or Full span

RBW (resolution band width): 300 kHz

ATT: 20 dB

SECTION 4 BLOCK DIAGRAM



MB-797 BOARD

Description

WRT-805A is comprised of the following:

MB-770 board

Audio and peripheral circuit block

..... Ref. No. 100s and 200s

PLL and RF circuit block Ref. No. 300s

CPU and peripheral circuit block Ref. No. 400s

Power supply circuit block Ref. No. 500s

Audio and peripheral circuit block

The audio signal which is input from the AUDIO CONNECTOR(CN100) is input into the INPUT LEVEL SWITCH circuit as an unbalance signal.

The INPUT LEVEL SWITCH circuit switches the input audio signal between the through output (reference input level -60 dBV) and attenuated 20 dB output (reference input level -40 dBV) by setting the S100 switch.

The audio signal which is outputted from the INPUT LEVEL SWITCH circuit is input into the AUDIO ATTENUATOR (ATT) circuit.

The ATT can be set between 0 to 21 dB in 3 dB steps by switching the resistance value using analog switch (IC100).

The control signal for the analog switch is the 3 bits (ATT0, ATT1, ATT2) signal that has been sent from the CPU(IC402).

This signal is set by the information on +/- switches (S400 and S401) input to the CPU.

The audio signal which is adjusted the volume by the ATT circuit is amplified by IC101(1/2), then input into the PHASE SWITCH circuit (S101 and IC101(2/2)).

The PHASE SWITCH circuit switches the phase of output signal from the IC101(2/2) by setting the S101 switch.

The audio signal which is outputted from the PHASE SWITCH circuit is input into the compressor circuit(IC104).

The audio signal is compressed to a signal level of 2:1(1/2) by the compressor circuit and then inputs into the pre-emphasis circuit. Note that time constant for the pre-emphasis is 50 μ s.

The audio signal is mixed with the tone signal (X201, 32.768 kHz) and battery alarm signal (X200, 32.782 kHz) by the amplifier (IC203) and is sent RF circuit block (VCO,CP300).

The A/D converter circuit (IC102, D104) detects the audio signal and converts into DC level voltage. The converted signal (ALO signal) is sent to the CPU and is used to indicate the input audio signal level on the LCD(ND400).

PLL and RF circuit block

The oscillation circuit utilizes the PLL frequency synthesizer method. The VCO (CP300) acts as an oscillator and modulator for the carrier frequency through voltage control.

The carrier frequency is controlled by the serial data (PLL data) sent from the CPU to the PLL IC (IC300) with the pre-scaler.

The signal amplified by the RF amplifier circuit (Q303,304) is output from the antenna via the low-pass filter(FL300) and isolator (CP300). Further the voltage comparator (Q300) detects the lock condition of the PLL by inputting the output signal (LD signal) from the phase comparator in the PLL IC, and sends the signal to CPU. The voltage control circuit (Q301, 302) performs ON/OFF control of the power voltage for the RF circuit. This control signal is the RFM signal from the CPU. (When theRFM signal switches "L", the power is provided to the RF circuit.)

CPU and the peripheral circuit block

The CPU (IC402) is a 4-bit microprocessor, and the clock is used a 4 MHz (X400, IC400).

The CPU sends out the PLL data, and controls the AF mute, RF mute, ATT, LCD, and so on.

The voltage detector circuit (IC403, 404) detects the power supply voltage (+3.0 V) and uses it to reset the CPU.

Also, the reference voltage circuit (R402, C401) generates a 3.0 V which is used by the CPU as the reference for detecting battery voltage and AF indicator voltages.

Power supply circuit block

The DC-DC converter circuit (IC500, Q500, Q501, Q502, D500, D505) extracts the 5 V (Vcc2) from the 1.5 V battery voltage and supplies to audio section.

The DC-DC converter circuit (IC501, Q504, Q505, Q506, D501, D506) extracts the 3 V (Vcc1) from the 1.5 V battery voltage and supplies to RF and CPU sections.

The power switch circuit performs ON/OFF control of voltage input to the DC-DC converter. This is controlled by power switch circuit (S500, Q503, Q507, Q510, Q511) and CPU (IC402).

SECTION 5

SEMICONDUCTOR PIN ASSIGNMENTS

Semiconductors of which functions are equivalent are described here. For parts replacement, refer to the section of Spare Parts in this manual. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

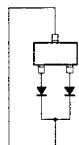
DIODE

-TOP VIEW-



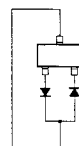
1SS367-T3SONY

-TOP VIEW-



MA132WK
MA132WK-TX
UMZ 8.2T
UMA8.2T-T106

-TOP VIEW-



MA133
MA133-TX

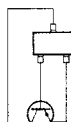
-TOP VIEW-



RD9.1SB
RD9.1SB-T1

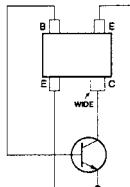
TRANSISTOR

-TOP VIEW-



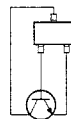
2SA1965-TL

-TOP VIEW-



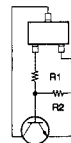
2SC5015-T1

-TOP VIEW-



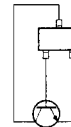
2SC4919
2SC4919-TL
2SD2216-Q

-TOP VIEW-



DTA144EE (R1=47K, R2=47K)
DTA144EE-TL (R1=47K, R2=47K)
DTC114EE (R1=10K, R2=10K)
DTC114EE-TL (R1=10K, R2=10K)

-TOP VIEW-

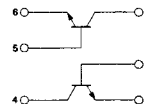


FMMT617TA

-TOP VIEW-

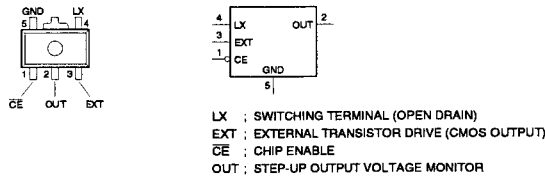


XN4504
XN4504-TW



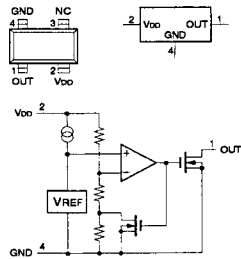
RH5RH303B-T1 (RICOH)
RH5RH503B-T1

C-MOS PWM STEP-UP DC/DC CONVERTER
-TOP VIEW-



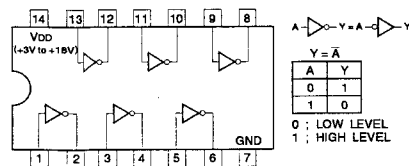
S-80820ANNP-EDH-T2 (SEIKO)
S-80827ANNP-EDQ-T2 (SEIKO)

C-MOS VOLTAGE DETECTOR
-TOP VIEW-



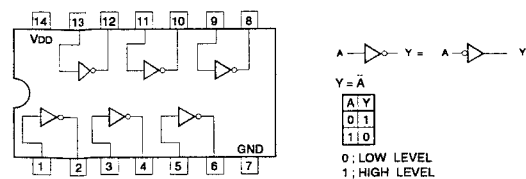
TC4069UBFS-EL (TOSHIBA)

C-MOS INVERTER
-TOP VIEW-



TC74VHC04FS(EL) (TOSHIBA) FLAT PACKAGE

C-MOS HEX INVERTERS
-TOP VIEW-

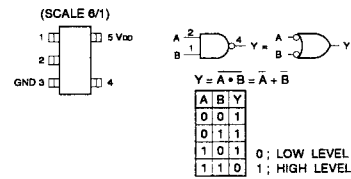


NOTE:

TYPE	VDD
74AC/74VHC/74VHCT	+2 to +5.5V
74ACT/74HCT	+4.5 to +5.5V
74LXX	+2 to +3.6V
OTHER TYPE	+2 to +6V

TC4S11F (TOSHIBA) CHIP PACKAGE
TC4S11F (TE85R)
TC7S00FU (TE85R) (TOSHIBA) CHIP PACKAGE

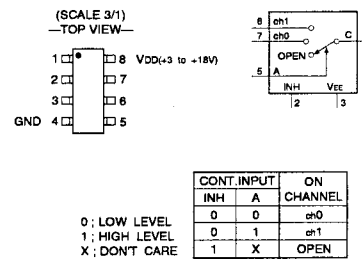
C-MOS 2-INPUT NAND GATE
-TOP VIEW-



TYPE	VDD
7S00F	+2 to +6 V
7S00FU	+2 to +6 V
4S11F	+3 to +18 V
4SU11F	+3 to +18 V
7SH00FU	+2 to +5.5 V

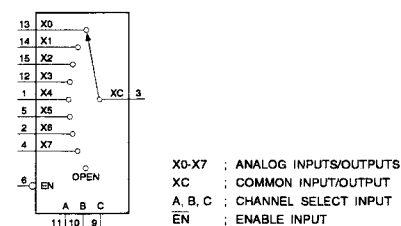
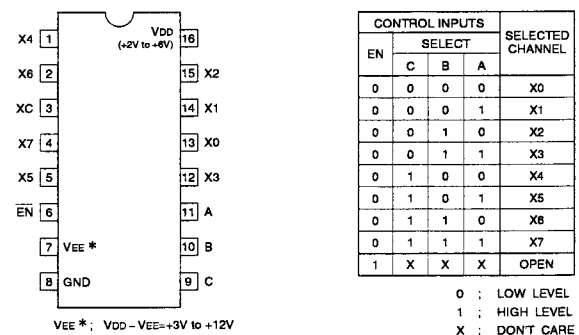
TC4W53FU (TOSHIBA) CHIP PACKAGE
TC4W53FU (TE12R)

C-MOS 2-CHANNEL MULTIPLEXER / DEMULTIPLEXER



TC74HC4051AFS(EL) (TOSHIBA)

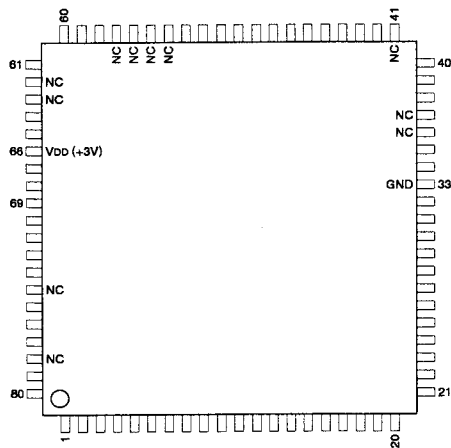
C-MOS 8-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
-TOP VIEW-



CPU Pin Description : IC402

UPD753036GK

-TOP VIEW-

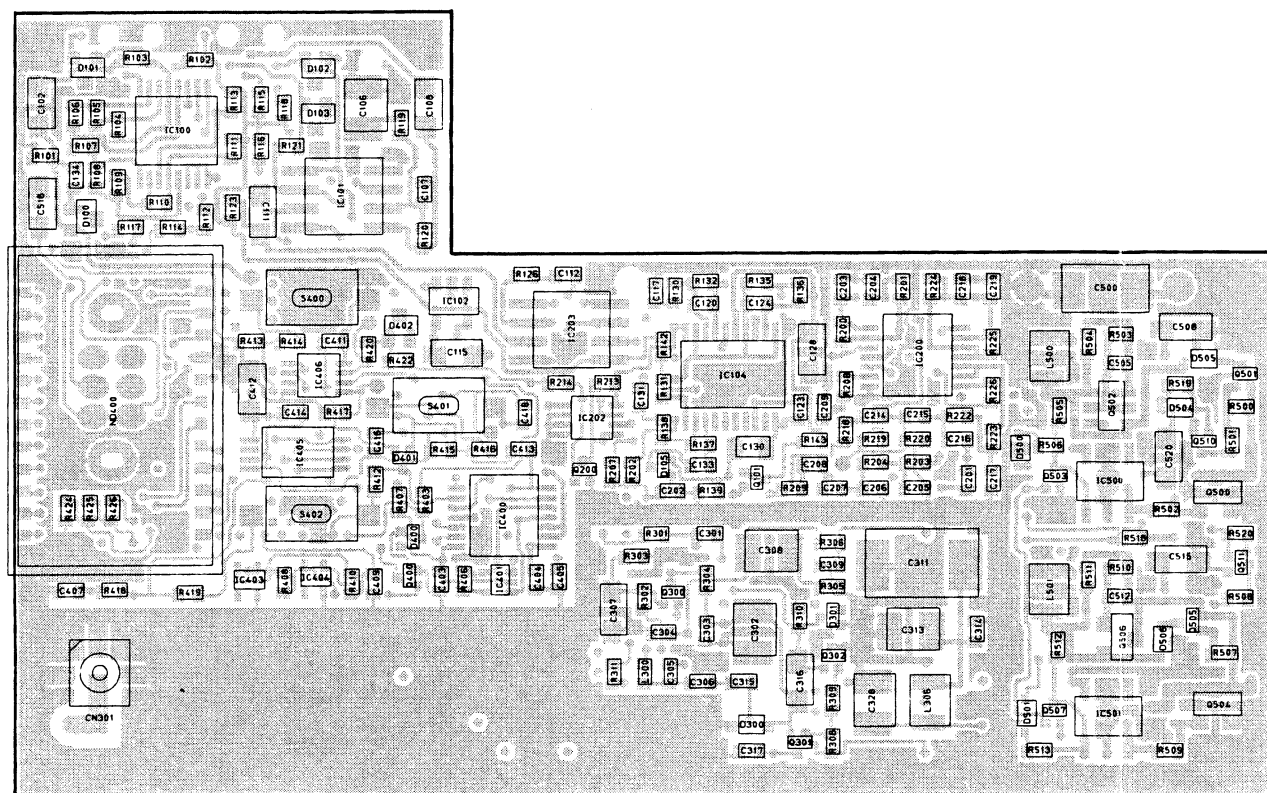


PIN	SIGNAL	I/O	DESCRIPTION
1 to 20	S31 to S12	OUT	LCD segment control
21 to 24	COM0 to COM3	OUT	LCD common control
25	BIAS	OUT	Power supply for LCD drive (+3.0 V)
26 to 28	VLC0 to VLC2	IN	Power supply for LCD drive
29 to 31	ATT0 to ATT2	OUT	AF ATT control
32	ID	OUT	ID
33	VSS	—	Ground
34	AFM	OUT	AF muting
35	LVD	OUT	Battery alarm
36, 37	—	—	NC
38	RXD	IN	Received data
40	TEST	IN	Test
42	POFF-IN	IN	Power off
43	+	IN	Channel switch +
44	-	IN	Channel switch -
45	SET	IN	SET switch
46	CLK	OUT	EEPROM/PLL Clock
47	DI	OUT	EEPROM/PLL data out
48	CS	OUT	EEPROM chip select
49	LAT	OUT	PLL latch
50	POFF-OUT	OUT	Power off

PIN	SIGNAL	I/O	DESCRIPTION
51	REM	OUT	RF muting
52	DO	IN	EEPROM data in
53	LD	IN	PLL lock
54 to 57	—	—	NC
58	BAT0, BAT1	IN	Battery voltage
60	DEST	IN	Selection for destination
61	ALO	IN	AF level
62, 63	—	—	NC
64	AVSS	—	Ground
65	AVREF	IN	A/D convertor reference voltage
66	VDD	—	VDD (+3.0 V)
67	XT1	OUT	32.768 kHz
68	XT2	IN	32.768 kHz
69	IC	IN	VDD (+3.0 V)
70	X1, X2	IN	4 MHz clock
72	RESET	IN	Reset
73	SEL	IN	VSS (Ground)
74 to 78	—	—	NC
79	TXD	OUT	Transmitted data
80	SLP	OUT	SLP

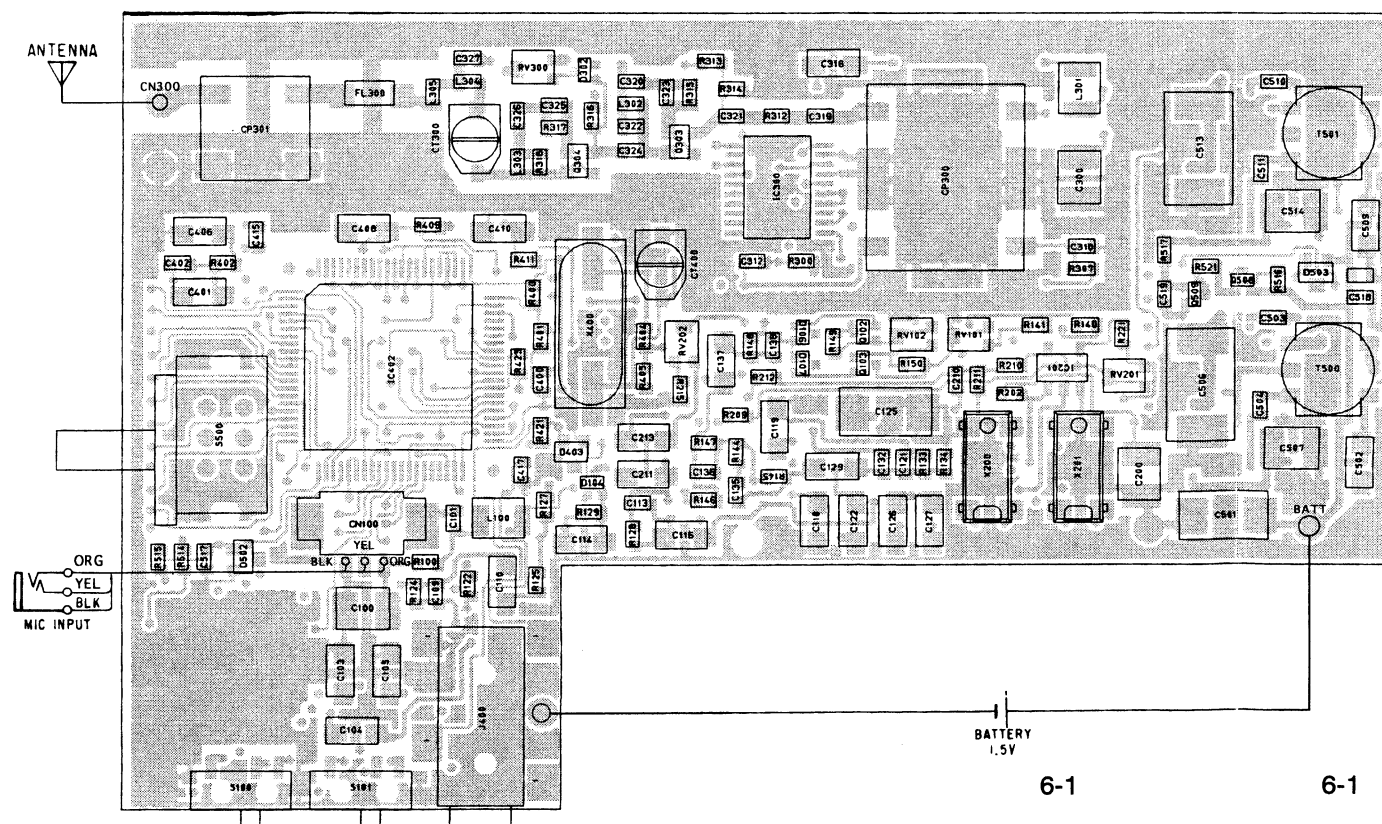
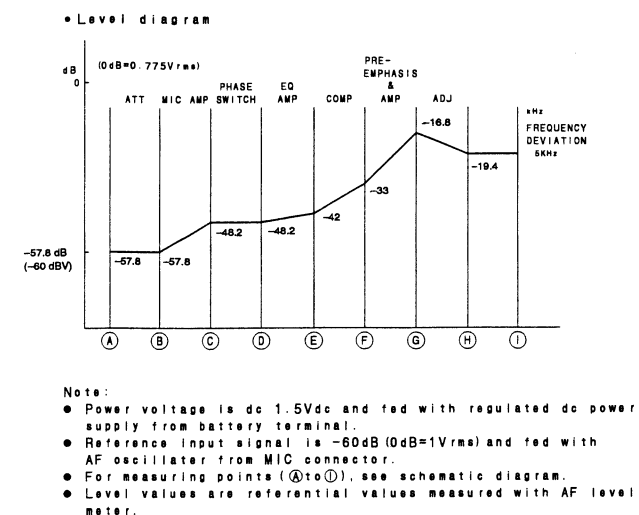
SECTION 6

BOARD LAYOUT AND SCHEMATIC DIAGRAM



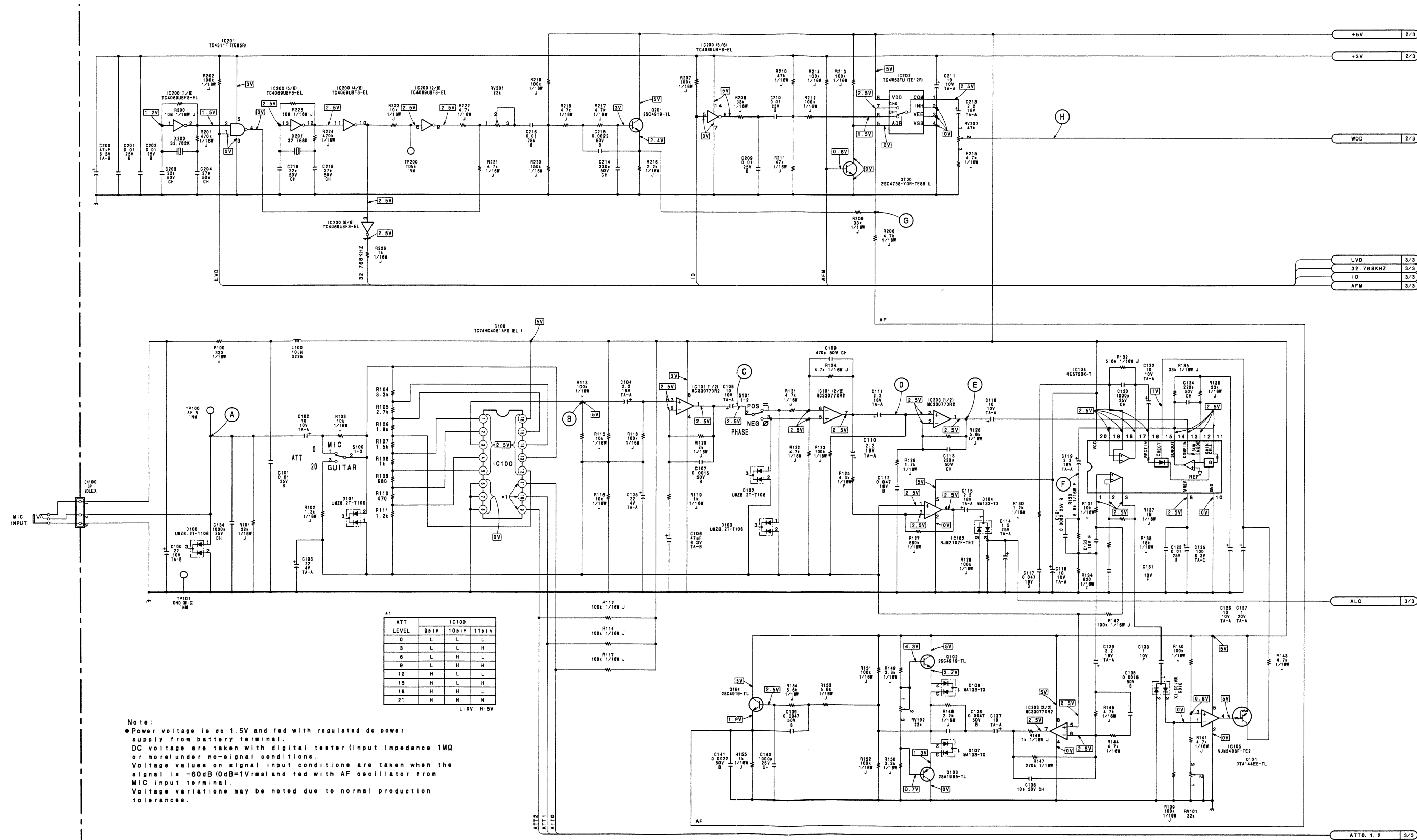
MB-797 (A side)
Board No. 1-667-871-11

LEVEL DIAGRAM



MB-797 (B side)
Board No. 1-667-871-11

WRT-805A (AU) : S/N 600001 and higher

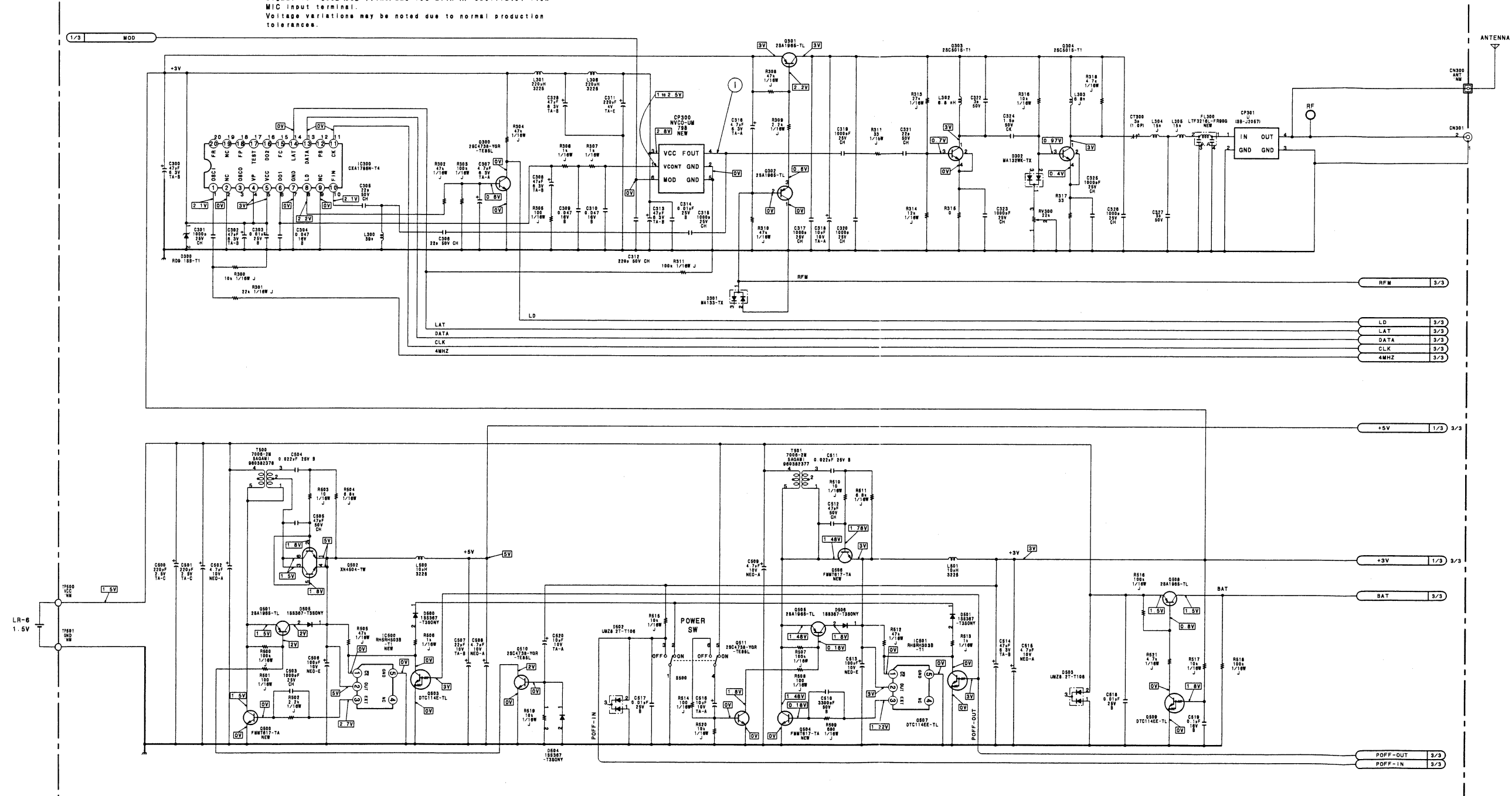


AUDIO
MB-797 (1/3)
 BOARD NO. 1-667-871-11
 B-WRT-805A-MB797-S/M

WRT-805A (AU) : S/N 600001 and higher

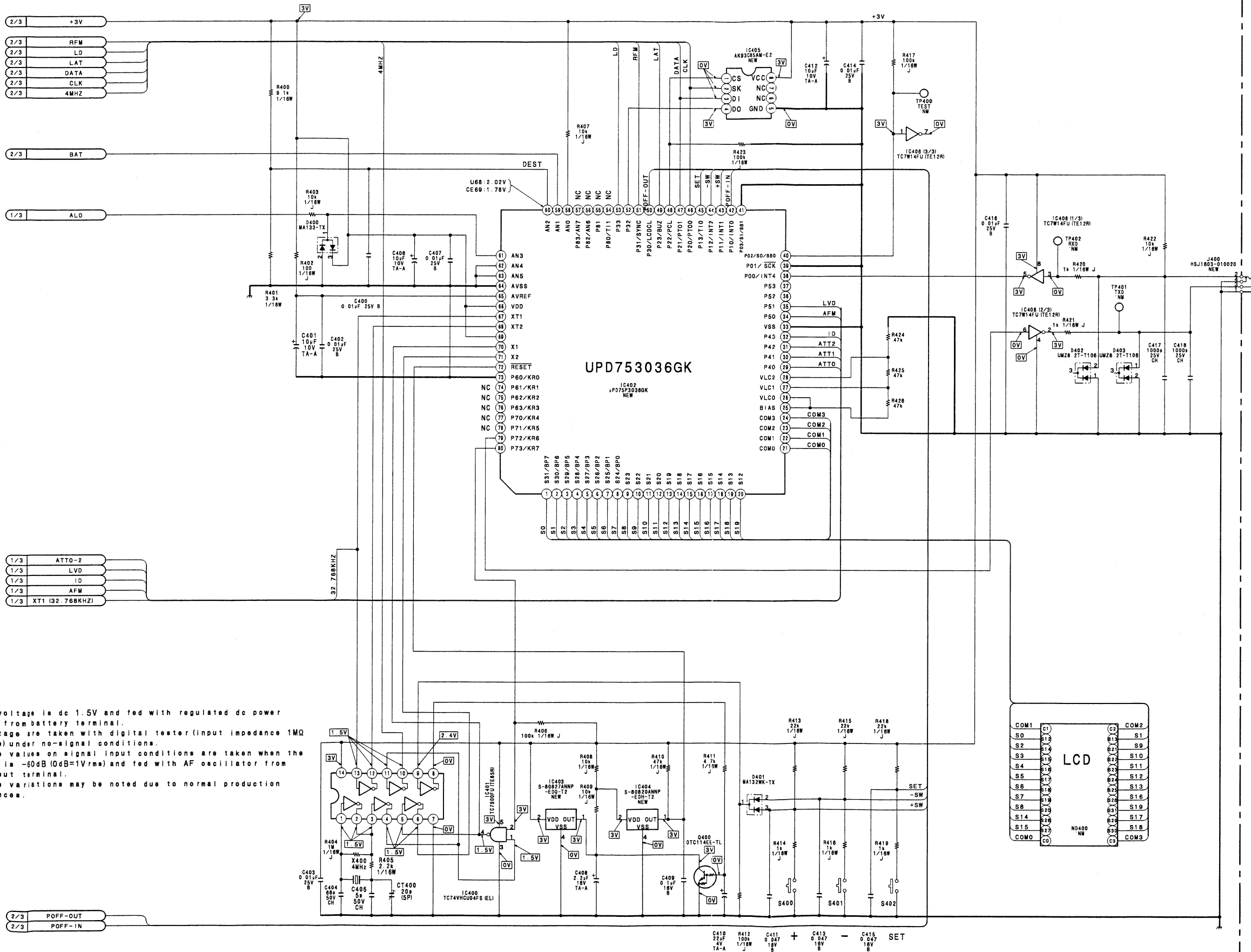
Note:

- Power voltage is dc 1.5V and fed with regulated dc power supply from battery terminal.
- DC voltage is taken with digital tester (input impedance 1M Ω or more) under no-signal conditions.
- Voltage values on signal input conditions are taken when the signal is $-60\text{dB } 0\text{dB} = 1\text{Vrms}$ and fed with AF oscillator from MP input terminal.
- Voltage variations may be noted due to normal production tolerances.



PLL/RF
POWER SUPPLY
MB-797 (2/3)
BOARD NO. 1-667-871-11

WRT-805A (AU) : S/N 600001 and higher



CPU
MB-797 (3/3)
BOARD NO. 1-667-871-11

WRT-805A (AU)

SECTION 7

SPARE PARTS

7-1. Notes on Repair Parts

1. Safety Related Components Warning

Components marked $\triangle$ are critical to safe operation.
Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.
Parts list has the present standardized repair parts.

3. Stock of Parts

Parts marked with "o" at SP(Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

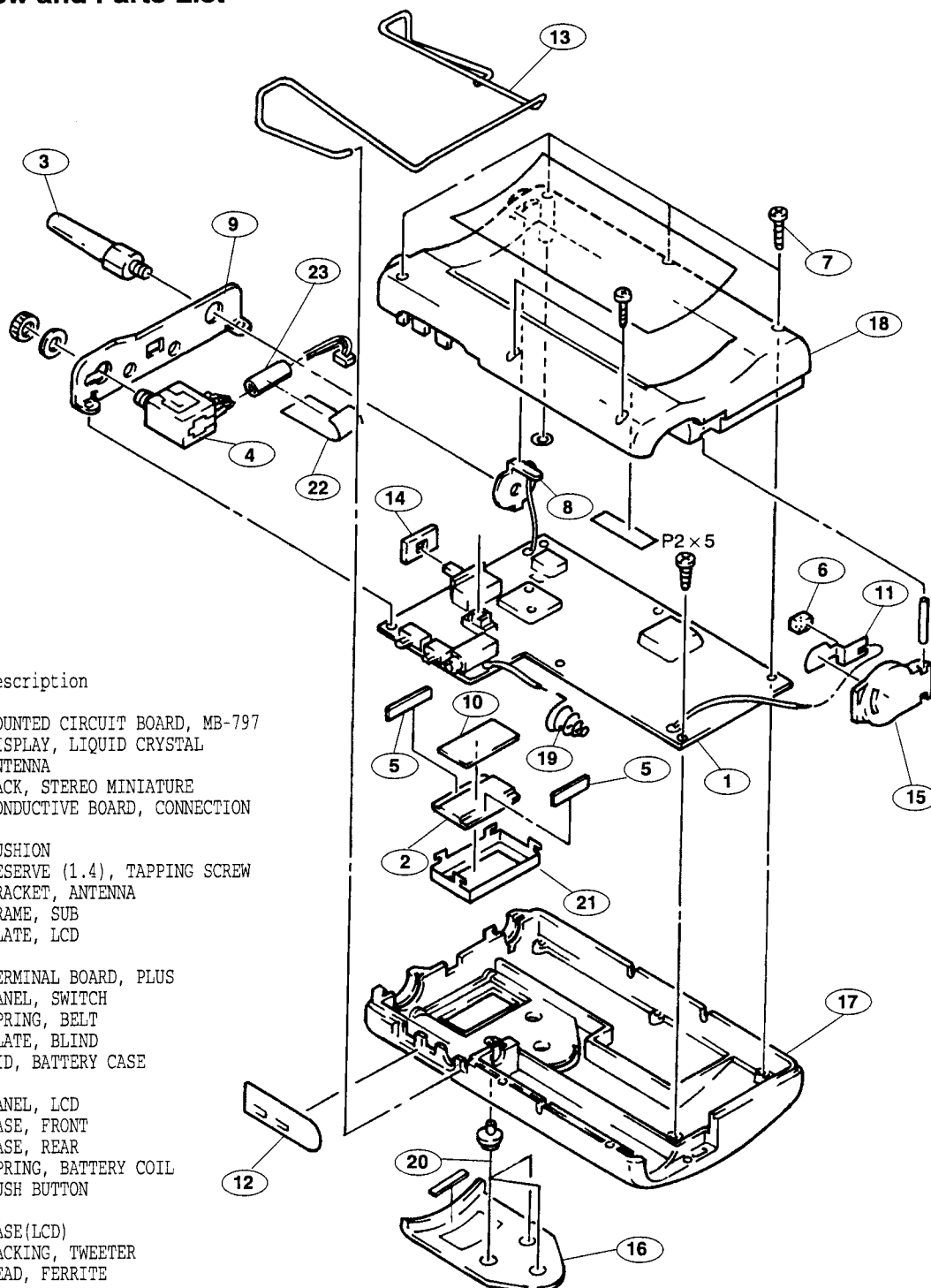
4. Units Representation

The following represented units are changed or omitted in writing.

Units		Representation
Capacitance	μF	uF
Inductance	μH	uH
Resistance	Ω	Abbreviation
Temperature	$^{\circ}\text{C}$	XXX-DEG-C

7-2. Exploded View and Parts List

No.	Part No.	SP Description
1	A-8318-602-A	o MOUNTED CIRCUIT BOARD, MB-797
2	1-467-301-11	s DISPLAY, LIQUID CRYSTAL
3	1-501-945-11	s ANTENNA
4	1-507-743-21	s JACK, STEREO MINIATURE
5	1-537-802-11	o CONDUCTIVE BOARD, CONNECTION
6	2-536-671-01	s CUSHION
7	2-544-826-01	s RESERVE (1.4), TAPPING SCREW
8	2-545-240-01	o BRACKET, ANTENNA
9	2-545-241-01	o FRAME, SUB
10	2-545-242-01	o PLATE, LCD
11	2-545-243-01	o TERMINAL BOARD, PLUS
12	2-545-244-01	o PANEL, SWITCH
13	2-545-245-01	o SPRING, BELT
14	2-545-246-01	o PLATE, BLIND
15	2-545-250-01	o LID, BATTERY CASE
16	2-545-251-01	o PANEL, LCD
17	2-545-252-01	o CASE, FRONT
18	2-545-253-02	o CASE, REAR
19	3-180-973-01	s SPRING, BATTERY COIL
20	3-678-339-01	s PUSH BUTTON
21	3-678-343-01	s CASE(LCD)
22	4-860-518-00	s PACKING, TWEETER
23	1-500-545-11	s BEAD, FERRITE



7-3. Electrical Parts List

(MB-797 BOARD)

MB-797 BOARD

Ref. No.
or Q'ty Part No. SP Description

1pc A-8318-602-A o MOUNTED CIRCUIT BOARD, MB-797(AU66)
(This assembly includes the following parts.)

C100	1-104-852-11	s TANTALUM, CHIP 22uF 20% 10V
C101	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C102	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C103	1-104-847-11	s TANTALUM, CHIP 22uF 20% 4V
C104	1-135-179-21	s TANTALUM 2.2uF 10% 16V
C105	1-104-847-11	s TANTALUM, CHIP 22uF 20% 4V
C106	1-110-569-21	s TANTALUM, CHIP 470uF 20% 6.3V
C107	1-162-965-11	s CERAMIC, CHIP 0.0015uF 10% 50V
C108	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C109	1-164-315-11	s CERAMIC, CHIP 470PF 5% 50V
C110	1-135-179-21	s TANTALUM 2.2uF 10% 16V
C111	1-135-179-21	s TANTALUM 2.2uF 10% 16V
C112	1-165-176-11	s CERAMIC 0.047uF 10% 16V
C113	1-162-957-11	s CERAMIC, CHIP 220PF 5% 50V
C114	1-107-688-21	s TANTALUM, CHIP 1.5uF 10% 25V
C115	1-135-179-21	s TANTALUM 2.2uF 10% 16V
C116	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C117	1-165-176-11	s CERAMIC 0.047uF 10% 16V
C118	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C119	1-135-179-21	s TANTALUM 2.2uF 10% 16V
C120	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C121	1-164-174-11	s CERAMIC, CHIP 0.0082uF 10% 25V
C122	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C123	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C124	1-162-957-11	s CERAMIC, CHIP 220PF 5% 50V
C125	1-111-253-11	s TANTALUM, CHIP 100uF 20% 6.3V
C126	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C127	1-135-177-21	s TANTALUM, CHIP 1uF 10% 25V
C129	1-135-179-21	s TANTALUM 2.2uF 10% 16V
C131	1-115-156-11	s CERAMIC 1uF 10V
C132	1-115-156-11	s CERAMIC 1uF 10V
C133	1-115-156-11	s CERAMIC 1uF 10V
C134	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C135	1-162-965-11	s CERAMIC, CHIP 0.0015uF 10% 50V
C136	1-162-915-11	s CERAMIC, CHIP 10PF 50V
C137	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C138	1-162-968-11	s CERAMIC, CHIP 0.0047uF 10% 50V
C139	1-162-968-11	s CERAMIC, CHIP 0.0047uF 10% 50V
C140	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C141	1-162-966-11	s CERAMIC, CHIP 0.0022uF 10% 50V
C200	1-110-569-21	s TANTALUM, CHIP 470uF 20% 6.3V
C201	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C202	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C203	1-162-919-11	s CERAMIC, CHIP 22PF 5% 50V
C204	1-162-920-11	s CERAMIC, CHIP 27PF 5% 50V
C209	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C210	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C211	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C213	1-135-179-21	s TANTALUM 2.2uF 10% 16V
C214	1-162-959-11	s CERAMIC, CHIP 330PF 5% 50V
C215	1-162-966-11	s CERAMIC, CHIP 0.0022uF 10% 50V
C216	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C218	1-162-920-11	s CERAMIC, CHIP 27PF 5% 50V
C219	1-162-919-11	s CERAMIC, CHIP 22PF 5% 50V
C300	1-110-569-21	s TANTALUM, CHIP 470uF 20% 6.3V
C301	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V

Ref. No. or Q'ty	Part No.	SP Description
C302	1-110-569-21	s TANTALUM, CHIP 470uF 20% 6.3V
C303	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C304	1-165-176-11	s CERAMIC 0.047uF 10% 16V
C305	1-162-919-11	s CERAMIC, CHIP 22PF 5% 50V
C306	1-162-919-11	s CERAMIC, CHIP 22PF 5% 50V
C307	1-135-181-21	s TANTALUM, CHIP 4.7uF 10% 6.3V
C308	1-104-913-11	s TANTALUM 10uF 10% 16V
C309	1-165-176-11	s CERAMIC 0.047uF 10% 16V
C310	1-165-176-11	s CERAMIC 0.047uF 10% 16V
C311	1-113-996-11	s TANTALUM, CHIP 220uF 20% 4V
C312	1-162-927-11	s CERAMIC, CHIP 100PF 5% 50V
C313	1-110-569-21	s TANTALUM, CHIP 470uF 20% 6.3V
C314	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C315	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C316	1-135-181-21	s TANTALUM, CHIP 4.7uF 10% 6.3V
C317	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C318	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C319	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C320	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C321	1-162-919-11	s CERAMIC, CHIP 22PF 5% 50V
C322	1-162-908-11	s CERAMIC, CHIP 3PF 50V
C323	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C324	1-162-906-11	s CERAMIC 1.5PF 0.25PF 50V
C325	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C326	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C327	1-162-910-11	s CERAMIC, CHIP 5PF 50V
C328	1-110-569-21	s TANTALUM, CHIP 470uF 20% 6.3V
C400	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C401	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C402	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C403	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C404	1-162-925-11	s CERAMIC, CHIP 68PF 5% 50V
C405	1-162-910-11	s CERAMIC, CHIP 5PF 50V
C406	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C407	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C408	1-135-179-21	s TANTALUM 2.2uF 10% 16V
C409	1-107-826-11	s CERAMIC, CHIP 0.1uF 10% 16V
C410	1-104-847-11	s TANTALUM, CHIP 22uF 20% 4V
C411	1-165-176-11	s CERAMIC 0.047uF 10% 16V
C412	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C413	1-165-176-11	s CERAMIC 0.047uF 10% 16V
C414	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C415	1-165-176-11	s CERAMIC 0.047uF 10% 16V
C416	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C417	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C418	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C500	1-109-930-11	s TANTALUM, CHIP 220uF 20% 2.5V
C501	1-109-930-11	s TANTALUM, CHIP 220uF 20% 2.5V
C502	1-115-170-11	s TANTALUM 4.7uF 20% 10V
C503	1-115-416-11	s CERAMIC, CHIP 1000PF 5% 25V
C504	1-164-227-11	s CERAMIC, CHIP 0.022uF 10% 25V
C505	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C506	1-117-372-11	s TANTALUM 100uF 20% 10V
C507	1-104-852-11	s TANTALUM, CHIP 22uF 20% 10V
C508	1-115-170-11	s TANTALUM 4.7uF 20% 10V
C509	1-115-170-11	s TANTALUM 4.7uF 20% 10V
C510	1-162-967-11	s CERAMIC, CHIP 0.0033uF 10% 50V
C511	1-164-227-11	s CERAMIC, CHIP 0.022uF 10% 25V
C512	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V

WRT-805A(AU)

(MB-797 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C513	1-117-372-11	s TANTALUM 100uF 20% 10V
C514	1-110-569-21	s TANTALUM, CHIP 470uF 20% 6.3V
C515	1-115-170-11	s TANTALUM 4.7uF 20% 10V
C516	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C517	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C518	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C519	1-107-826-11	s CERAMIC, CHIP 0.1uF 10% 16V
C520	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
CN100	1-766-809-11	o CONNECTOR, PC BOARD 3P, MALE
CN301	1-573-223-21	s JACK, 1P
CP300	1-760-668-21	s VCO MVU-778i
CP301	1-251-235-11	s ISOLATOR CU407BIF-807
CT300	1-141-435-21	s TRIMMER, CHIP 3PF
CT400	1-141-322-11	s TRIMMER, CHIP 20PF
D100	8-719-039-99	s DIODE UMZ8.2
D101	8-719-039-99	s DIODE UMZ8.2
D102	8-719-039-99	s DIODE UMZ8.2
D103	8-719-039-99	s DIODE UMZ8.2
D104	8-719-421-69	s DIODE MA133
D105	8-719-421-69	s DIODE MA133
D106	8-719-421-69	s DIODE MA133
D107	8-719-421-69	s DIODE MA133
D300	8-719-158-35	s DIODE RD9.1SB
D301	8-719-421-69	s DIODE MA133
D302	8-719-421-67	s DIODE MA132WK
D400	8-719-421-69	s DIODE MA133
D401	8-719-421-67	s DIODE MA132WK
D402	8-719-039-99	s DIODE UMZ8.2
D403	8-719-039-99	s DIODE UMZ8.2
D500	8-719-049-09	s DIODE 1SS367-T3SONY
D501	8-719-049-09	s DIODE 1SS367-T3SONY
D502	8-719-039-99	s DIODE UMZ8.2
D503	8-719-039-99	s DIODE UMZ8.2
D504	8-719-049-09	s DIODE 1SS367-T3SONY
D505	8-719-049-09	s DIODE 1SS367-T3SONY
D506	8-719-049-09	s DIODE 1SS367-T3SONY
FL300	1-233-939-11	s FILTER, LOW-PASS (SMD TYPE)
IC100	8-759-523-88	s IC TC74HC4051AFT(EL)
IC101	8-759-466-68	s IC MC33077DR2
IC102	8-759-710-79	s IC NJM2107F
IC104	8-759-285-00	s IC NE575DK
IC105	8-759-710-82	s IC NJM2406F
IC200	8-759-278-13	s IC TC4069UBFS-EL
IC201	8-759-209-69	s IC TC4S11F
IC202	8-759-082-61	s IC TC4W53FU
IC203	8-759-466-68	s IC MC33077DR2
IC300	8-752-069-39	s IC CXA1786N
IC400	8-759-530-30	s IC TC74VHC04FT(EL)
IC401	8-759-058-54	s IC TC7S00FU(T85R)
IC403	8-759-466-70	s IC S-80827ANNP-EDQ-T2
IC404	8-759-466-71	s IC S-80820ANNP-EDH-T2
IC405	8-759-465-76	s IC AK93C85AM-E2
IC406	8-759-277-63	s IC TC7W14FU(T812R)
IC500	8-759-466-67	s IC RH5RH503B-T1
IC501	8-759-380-06	s IC RH5RH303B-T1

(MB-797 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
J400	1-779-755-11	s JACK, 1P
L100	1-414-398-11	s INDUCTOR 10uH
L300	1-414-470-31	s INDUCTOR 39nH
L301	1-410-658-31	s INDUCTOR, CHIP 220UH
L302	1-414-461-11	s INDUCTOR 6.8nH
L303	1-414-461-11	s INDUCTOR 6.8nH
L304	1-414-465-31	s INDUCTOR 15nH
L305	1-414-465-31	s INDUCTOR 15nH
L306	1-410-658-31	s INDUCTOR, CHIP 220UH
L500	1-414-398-11	s INDUCTOR 10uH
L501	1-414-398-11	s INDUCTOR 10uH
Q101	8-729-928-27	s TRANSISTOR DTA144EE
Q102	8-729-015-66	s TRANSISTOR 2SC4919
Q103	8-729-031-69	s TRANSISTOR 2SA1965-TL
Q104	8-729-015-66	s TRANSISTOR 2SC4919
Q200	8-729-425-64	s TRANSISTOR 2SD2216-Q
Q201	8-729-015-66	s TRANSISTOR 2SC4919
Q300	8-729-425-64	s TRANSISTOR 2SD2216-Q
Q301	8-729-031-69	s TRANSISTOR 2SA1965-TL
Q302	8-729-031-69	s TRANSISTOR 2SA1965-TL
Q303	8-729-039-32	s TRANSISTOR 2SC5015-T1
Q304	8-729-039-32	s TRANSISTOR 2SC5015-T1
Q400	8-729-928-90	s TRANSISTOR DTC114EE
Q500	8-729-041-51	s TRANSISTOR FMMT617TA
Q501	8-729-031-69	s TRANSISTOR 2SA1965-TL
Q502	8-729-425-18	s TRANSISTOR XN4504
Q503	8-729-928-90	s TRANSISTOR DTC114EE
Q504	8-729-041-51	s TRANSISTOR FMMT617TA
Q505	8-729-031-69	s TRANSISTOR 2SA1965-TL
Q506	8-729-041-51	s TRANSISTOR FMMT617TA
Q507	8-729-928-90	s TRANSISTOR DTC114EE
Q508	8-729-031-69	s TRANSISTOR 2SA1965-TL
Q509	8-729-928-90	s TRANSISTOR DTC114EE
Q510	8-729-425-64	s TRANSISTOR 2SD2216-Q
Q511	8-729-425-64	s TRANSISTOR 2SD2216-Q
R100	1-216-815-11	s METAL, CHIP 330 5% 1/16W
R101	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R102	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R103	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R104	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R105	1-216-826-11	s METAL, CHIP 2.7K 5% 1/16W
R106	1-216-824-11	s METAL, CHIP 1.8K 5% 1/16W
R107	1-216-823-11	s METAL, CHIP 1.5K 5% 1/16W
R108	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R109	1-216-819-11	s METAL, CHIP 680 5% 1/16W
R110	1-216-817-11	s METAL, CHIP 470 5% 1/16W
R111	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R112	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R113	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R114	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R115	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R116	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R117	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R118	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R119	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R120	1-218-854-11	s METAL 2K 0.50% 1/16W
R121	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R122	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W

(MB-797 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R123	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R124	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R125	1-218-862-11	s METAL 4.3K 0.50% 1/16W
R126	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R127	1-216-855-11	s METAL, CHIP 680K 5% 1/16W
R128	1-216-830-11	s METAL, CHIP 5.6K 5% 1/16W
R129	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R130	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R131	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R132	1-216-830-11	s METAL, CHIP 5.6K 5% 1/16W
R133	1-218-867-11	s METAL 6.8K 0.50% 1/16W
R134	1-218-845-11	s METAL 820 0.50% 1/16W
R135	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R136	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R137	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R138	1-216-836-11	s METAL, CHIP 18K 5% 1/16W
R139	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R140	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R141	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R142	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R143	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R144	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R145	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R146	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R147	1-216-850-11	s METAL, CHIP 270K 5% 1/16W
R148	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R149	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R150	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R151	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R152	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R153	1-216-830-11	s METAL, CHIP 5.6K 5% 1/16W
R154	1-216-830-11	s METAL, CHIP 5.6K 5% 1/16W
R155	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R200	1-219-570-11	s METAL 10M 5% 1/16W
R201	1-216-853-11	s METAL, CHIP 470K 5% 1/16W
R202	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R206	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R207	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R208	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R209	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R210	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R211	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R212	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R213	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R214	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R215	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R216	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R217	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R218	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R219	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R220	1-216-847-11	s METAL, CHIP 150K 5% 1/16W
R221	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R222	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R223	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R224	1-216-853-11	s METAL, CHIP 470K 5% 1/16W
R225	1-219-570-11	s METAL 10M 5% 1/16W
R226	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R300	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R301	1-216-837-11	s METAL, CHIP 22K 5% 1/16W

(MB-797 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R302	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R303	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R304	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R305	1-216-817-11	s METAL, CHIP 470 5% 1/16W
R306	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R307	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R308	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R309	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R310	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R311	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R312	1-216-803-11	s METAL, CHIP 33 5% 1/16W
R313	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R314	1-216-834-11	s METAL, CHIP 12K 5% 1/16W
R315	1-216-864-11	s METAL, CHIP 0 5% 1/16W
R316	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R317	1-216-803-11	s METAL, CHIP 33 5% 1/16W
R318	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R400	1-218-345-11	s RES, CHIP 9.1K 5% 1/16W
R401	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R402	1-216-809-11	s METAL, CHIP 100 5% 1/16W
R403	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R404	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R405	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R406	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R407	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R408	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R409	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R410	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R411	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R412	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R413	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R414	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R415	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R416	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R417	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R418	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R419	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R420	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R421	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R422	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R423	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R424	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R425	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R426	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R500	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R501	1-216-809-11	s METAL, CHIP 100 5% 1/16W
R502	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R503	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R504	1-216-831-11	s METAL, CHIP 6.8K 5% 1/16W
R505	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R506	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R507	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R508	1-216-809-11	s METAL, CHIP 100 5% 1/16W
R509	1-216-819-11	s METAL, CHIP 680 5% 1/16W
R510	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R511	1-216-831-11	s METAL, CHIP 6.8K 5% 1/16W
R512	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R513	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R514	1-216-809-11	s METAL, CHIP 100 5% 1/16W

(MB-797 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R515	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R516	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R517	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R518	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R519	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R520	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R521	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
RV101	1-223-348-11	s RES, ADJ, CERMET 22K
RV102	1-223-348-11	s RES, ADJ, CERMET 22K
RV201	1-223-348-11	s RES, ADJ, CERMET 22K
RV202	1-223-349-11	s RES, ADJ, CERMET 47K
RV300	1-223-348-11	s RES, ADJ, CERMET 22K
S100	1-572-922-11	s SWITCH, SLIDE
S101	1-572-922-11	s SWITCH, SLIDE
S400	1-572-473-11	s SWITCH, PUSH
S401	1-572-473-11	s SWITCH, PUSH
S402	1-572-473-11	s SWITCH, PUSH
S500	1-692-990-21	s SWITCH, SLIDE
T500	1-475-285-11	s DC-DC CONVERTER
T501	1-475-284-11	s DC-DC CONVERTER
X200	1-767-314-11	s CRYSTAL 32.768MHz
X201	1-760-928-21	s CRYSTAL 32.768MHz
X400	1-760-474-11	s CRYSTAL 1.000MHz

FRAME

Ref. No. or Q'ty	Part No.	SP Description
CN100(to MB-797 board)		
1pc	1-565-122-11	o CONNECTOR, HOUSING 3P, FEMALE
3pcs	1-565-164-21	o CONTACT, MALE

7-4. Accessories Supplied

Ref. No. or Q'ty	Part No.	SP Description
1pc	3-860-341-31	s MANUAL, INSTRUCTION